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A
COMPLETE TREATISE
ON
SYPHILIS.

A

COMPLETE TREATISE

ON THE

Symptoms, Effects, Nature and Treatment

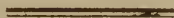
OF

SYPHILIS,

BY F. SWEDIAUR, M. D.

TRANSLATED FROM THE FOURTH FRENCH EDITION,

BY THOMAS T. HEWSON,
ONE OF THE SURGEONS OF THE ALMS-HOUSE.



PHILADELPHIA:

PUBLISHED BY THOMAS DOBSON,
AT THE STONE HOUSE, NO. 41, SOUTH SECOND STREET.

William Fry, Printer.

1815.

District of Pennsylvania, to wit:

***** BE IT REMEMBERED, that on the eighth day of February,
* SEAL. * in the thirty-ninth year of the independence of the United
* States of America, A. D. 1815, Thomas Dobson, of the said
***** district, hath deposited in this office the title of a book, the
right whereof he claims as proprietor, in the words following, to wit:

“ A Complete Treatise on the Symptoms, Effects, Nature and Treatment of Syphilis, by F. Swediaur, M. D. Translated from the fourth French Edition, by Thomas T. Hewson, one of the Surgeons of the Alms-House.”

In conformity to the act of the Congress of the United States, intituled, “ An act for the encouragement of learning, by securing the copies of maps, charts, and books, to the authors and proprietors of such copies, during the times therein mentioned.” And also to the act, entitled “ An act supplementary to an act, entitled ‘ An act for the encouragement of learning, by securing the copies of maps, charts, and books, to the authors and proprietors of such copies during the times therein mentioned,’ and extending the benefits thereof to the arts of designing, engraving, and etching historical and other prints.”

D. CALDWELL,
Clerk of the District of Pennsylvania.

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INTRODUCTION.

DR. SWEDIAUR having collected many facts and observations, relating to the Venereal Disease, was induced to offer them to the public in 1784, when the first edition appeared in England. A second edition without any alterations, was published in 1786. In 1788, he gave a third edition with corrections and additions. In this edition, he added a chapter on the new form of the Venereal Disease, which had appeared in Canada; and introduced several improvements in the mode of treating Syphilis. A fourth edition was afterwards printed in England; but this was merely a new impression.

In 1785, Dr. Gibelin gave an excellent translation in French of the first English edition; this was afterwards reprinted. In 1799, the author published a new edition, in two volumes, written in the French language. This may be considered in many respects as an intirely new work, for it contains many additional observations on the nature of Syphilis, and in it many important questions are determined, which the author was unable to resolve in the preceding editions, for want of a sufficient number of facts and observations. In 1801, Dr. Swediaur published another edition, containing not only many improvements, but likewise considerable additions, and even several new chapters. The chapter relating to oxygenated remedies, has been intirely new

modelled; the utility of these remedies candidly examined, and their real value justly appreciated.

From this edition of 1801, the present translation has been undertaken at the request of Mr. Dobson; and in compliance with his wishes, the historical part contained in the introduction to each volume of the original, and a chapter being merely an enumeration of the articles, with their various synonymes, employed in the cure of Syphilis, have been omitted. In this, the publisher has been actuated by a sincere desire of presenting, at a moderate price, one of the best practical guides in the treatment of a disease, which continues to be frequent among a large portion of the civilized world.

In performing his task, the translator has endeavoured to give a plain and faithful rendering of the author's meaning; with this view, he has availed himself of the third English edition, and transcribed entire passages, particularly the history of cases, where he presumed no alteration of language could with propriety be introduced. Sensible of the indulgence with which works conveying information, intended for the relief and benefit of mankind, have ever been received, the translator presents his humble performance to the public favour.

TREATISE, &c.

CHAPTER I.

Of Blennorrhagia, or Virulent Gonorrhœa.

PREVIOUSLY to entering on a description of this disease, it will be proper to lay before the reader the reasons which have induced me to change the usual name, and to justify the name I have substituted for the old one.

Authors have mentioned this disease under different names; they have called it Gonorrhœa, Gonorrhœa virulenta, Gonorrhœa maligna, Gonorrhœa venerea; and in women, Fluor albus malignus, seu venereus. The word Gonorrhœa is derived from the Greek words *Γονε*, semen, and *Ρέω*, to flow; and signifies fluxus seminis, or discharge of semen. This appellation is improper, since it leads to an error respecting the nature and treatment of this disease, by conveying the idea of a discharge of semen, which never occurs in the disease which is the subject of our inquiries.

The matter discharged in this disease being, as will be shown, simple mucus, only changed in colour and quantity. It has appeared to me that the name of Blennorrhagia derived from the Greek words *Βλεννα*, mucus, *Ρέω*, to flow, would be more appropriate; and as there are two

very distinct diseases in which this running occurs, one accompanied by symptoms of local inflammation,—the other without inflammatory symptoms, I have endeavoured to characterize each by the simple difference of termination of the same word, calling the former *Blennorrhagia*, seu *mucifluxus inflammatorius activus*, the latter, *Blennorrhœa*, seu *mucifluxus passivus*.

But as a discharge of mucus, accompanied by inflammatory symptoms, may proceed from different causes; to characterize more particularly the nature of the disease before us, and to distinguish it with precision from all other puriform discharges from the genital organs, which have hitherto been confounded under the very inappropriate name of *Gonorrhœa*, I have added to *Blennorrhagia* the word *syphilitic*, which comes from the Greek words *Συς*, swine, and *Φιλία*, love, whence is formed *syphilis* or impure connection. This expression is adopted by the best nosologists.

I have preferred this word to *venereal*, because, as will be shown in the course of this work, these discharges, as well as many other diseases of the genital organs contained in this treatise, may proceed from coition, or venereal intercourse, without being of a syphilitic nature, or without partaking in the slightest degree of this specific virus.

The English name *Clap* is derived from the old French word *clapiers*, the name formerly given to places resorted to and inhabited by prostitutes, and restricted to certain quarters of the town, as is the case to this day in many of the large towns in Italy.

By the general term *Blennorrhagia*, I understand a puriform discharge from the orifice of the urethra, or from the prepuce in men, and from that of the vagina in

females, attended with a heat or scalding, especially during the emission of urine, occasioned by the action of the syphilitic virus, or of other irritating matter applied. If the syphilitic virus is the cause of the running, the disease will be designated by the specific appellation blennorrhagia syphilitica.

Syphilitic blennorrhagia is a contagious puriform discharge from the mucous glands of the urethra, and from the membrane lining that canal, or from the glans penis in men, and from the interior of the genital organs in women, produced by a virus sui generis.

This disease appears, usually in three or four, and sometimes six days, seldom later, after an impure connection, with the following symptoms: The person experiences at the end of the penis a peculiar disagreeable sensation, a kind of tickling or slight itching felt in the urethra near the frænum, and which continues one or two days; the mouth of the urethra then acquires an increased sensibility, becomes red, swells, and there oozes, or is discharged, a limpid or yellow matter which stains the linen. When the running occurs the titillation increases, and becomes more painful, especially during the emission of urine, which is followed by a smarting and burning in the affected part. In some persons the first symptom that takes place, is the discharge of thick mucus; in these cases the patient experiences a painful scalding in making water. These symptoms usually increase for three or four days; sometimes, however, not sensibly, for eight or twelve days. The glans penis acquires a dark red or livid colour; the running soon becomes more abundant, the matter is of a yellow or greenish colour, and resembles diluted pus; the swelling of the glans and even of the whole of the penis becomes considerable; the patient has

a frequent desire to make water; and he suffers, especially when he has been some time in bed lying on his back frequent involuntary erections, so painful as to disturb his rest and oblige him to rise.

This is the usual train of symptoms when the inflammation is light and superficial.

But in many cases, the inflammation extends to the reticular substance of the corpus spongiosum of the urethra; then the erections become excessively painful, the frænum being drawn down while the body of the penis is forced upwards by the violence of the erection; this is called a chordee. In this state the vessels of the urethra are often ruptured, occasioning considerable hemorrhages. At other times the discharge is streaked with blood; the prepuce is also at the same time so inflamed and swollen that it cannot be drawn back, or when drawn back it cannot be returned. In some instances, though not often, it is true, the strangulation produces a sudden mortification of the glans penis, and even causes the death of the patient.

Symptoms and Progress.

In some persons one or more of the inguinal glands swell and become painful, followed by a symptomatic fever. Then often the lymphatic vessels and glands of the penis swell, knotted cords are felt on the dorsum penis, and the skin of the penis is swelled and painful. Besides the symptoms just described, the patient not unfrequently, whether from his own imprudence or from improper treatment, feels a peculiar uneasiness, tension, and swelling of the spermatic cord and of the testicles, accompanied by a diminution or even total suppression of the running. In

other cases the disorder increases; the irritation and inflammation extend along the canal of the urethra. All the symptoms become more violent, the pain in making water felt in the perinæum, or further back, is excruciating, the patient is afraid to pass his urine, though continually urged by the distressing, harassing titillation in the neck of the bladder, and in the anus; he has an incessant desire to make water, though he can void but a few scalding drops. The whole canal of the urethra is swollen and in a state of tension, the patient has frequent erections, and experiences darting pains along this canal through the perinæum to the anus, and he is extremely restless. In this state the swelling of the glands of the urethra often impede the passage of the urine, which is voided in a small forked stream; and if the virulent discharge should be considerably diminished or totally suppressed, a suppression of urine frequently occurs, caused by a constriction or inflammation of the neck of the bladder, or by a swelling or inflammation of the prostate gland and contiguous parts.

In other instances the urethra discharges small clots or even pure blood, and there are evident marks of an ulceration of the urethra, and the system soon becomes infected.

The inflammation of the urethra is sometimes so great, that there is no secretion from the glands and the membrane lining the canals; the same is sometimes observable in inflammation of the mucous membrane of the nose and lungs, in some catarrhs. All discharge then ceases. To this form of the disease some writers have improperly applied the term *Gonorrhœa sicca*, or dry Clap.

After these symptoms have continued with more or less violence, or have increased for one, two or three

weeks, or sometimes even for seven, according to the regimen or treatment employed, they begin to lessen gradually. The difficulty and frequent desire to make water cease; the erections are no longer painful; the matter acquires greater consistence, and ropes between the fingers; at length the running disappears. In other instances, and more frequently, the inflammatory symptoms gradually subside, but the running continues for weeks, months, and even years; this constitutes the disease termed *Blennorrhœa*.

Sometimes the inflammatory symptoms in blennorrhagia gradually disappear, leaving however an ulcer in the urethra, keeping up an obstinate ichorous discharge, and occasioning a constitutional infection; this is termed *Blennorrhœa complicata*, *s. ulcerosa*, *s. pyica*, or *pyuria*.

In other cases there remains a stricture, callosity or excrescence in the urethra. Sometimes also the syphilitic blennorrhagia as I have already remarked, produces a dangerous and fatal paraphymosis; at other times a swelling of the testicles, an induration of these organs, or of the glands of the urethra, an inflammation and schirrous enlargement of the prostate, with a suppression of urine more or less complete, and attended with more or less pain and danger. Lastly, at other times, though more rarely, the suppression of the running suddenly produces absolute deafness or a very violent ophthalmia, and in the end unequivocal symptoms of the Pox.

Exciting Cause.

The exciting cause of syphilitic blennorrhagia is always the specific virus applied to the mucous membrane, or to

the orifices of the excretory ducts of the mucous glands of the urethra, or to the glans penis in men and to the internal surface of the genital organs in women. To receive the infection it is not necessary that the penis should be introduced within the vagina, as many patients imagine; the most superficial contact will sometimes produce the effect; and I have no doubt that in visiting the privy after persons affected with the disease, it may be occasioned by the mere contact or rubbing of the penis against the seat on which some of the virus is deposited.

The infection applied to some parts of a healthy person appears to act with more or less difficulty according to the structure and irritability of the part, or to the peculiar constitution of the individual; for we see persons exposed to every possibility of infection without being affected with the disease. Perhaps the violence of the action produced by the virus depends upon the quality or the degree of acrimony of the virus.

From my own observations, and from those made by respectable practitioners it does not appear, as asserted by some writers, that blennorrhagia can be communicated only by one infected with that disease. A woman sometimes communicates a clap without having the slightest symptom of the disease.

Proximate Cause of Blennorrhagia.

The syphilitic virus like all other acrid, stimulating or irritating substances, applied to the surface of the mucous membranes or to the orifices of the mucous glands, in a state of greater or less irritability, excites and increases the secretion, changes the colour and consistence of the

secreted fluid, and produces redness, heat, and painful tension of the part, or a local inflammation, termed by many writers superficial, or erysipelatous inflammation. (Phlogosis erythema. Cullen). Nevertheless, in some more violent cases, the virus produces an excoriation, or a real ulcer of the affected part, and a purulent discharge. (Pyuria). The fluid discharged by the effect of this irritation, always partakes of the nature of the syphilitic virus, and is consequently infectious.

Seat of Syphilitic Blennorrhagia.

Syphilitic Blennorrhagia in men, when immediately proceeding from an impure connexion, is always seated at a very short distance from the orifice of the urethra above the frænum, in that dilatation of the canal termed *fossa navicularis*. It there affects the excretory ducts of one or two of the mucous glands, named after the discoverer, *lacunæ mucosæ Morgagni*. When blennorrhagia is seated higher up the urethra in the curve, veru montanum, neck of the bladder, or the bladder itself, it is owing to injudicious treatment, or to some cause which has checked or suppressed the original running, or it may depend upon some internal cause or acrid matter deposited from the mass of the blood.

Sometimes from the natural progress of the disease, but more frequently from the errors committed by the patient, or from the effect of improper remedies, the irritation and inflammation are liable to shift their seat; they then frequently affect the orifice of a mucous gland, opening at the first bend of the urethra; at other times they affect the orifices of two glands, situated further up, named

after the discoverer, Cowper's glands. Sometimes they occupy either the protuberances covering the orifices of the vesiculæ seminales, which have received the name of veru montanum, or caput gallinaginis, or the orifices of the prostate gland, which open round the veru montanum, and they are observed likewise to affect the prostate gland, and even the neck of the bladder.

In the first instance, the pain and ardor urinæ, are felt at the frænum; in the second, these symptoms are referred to the bend of the urethra; in the third, the perinæum is the seat of these symptoms; in the fourth, the vas deferens and the epididimus are affected; in the fifth and sixth, the pain and other symptoms are principally felt near the anus, when there is often a total suppression of urine.

In some cases, not so frequent indeed, the virus does not penetrate the urethra during coition; but being applied to the glans penis, it irritates the excretory ducts of the sebaceous glands, situated round the coronæ glandis, producing a discharge to which I have given the appellation of blennorrhagia balani.

In the next chapter I shall describe the seat, the symptoms, and progress of syphilitic blennorrhagia in women.

Modern practitioners have observed, that in what they have termed virulent gonorrhœa of women, there are never, or very rarely, ulcers in the affected parts; hence it was inferred, that they never occur in the same disease in men. But the general prejudice opposed to this opinion was so inveterate, that neither analogy nor the conclusions drawn from numerous dissections, by the celebrated Morgagni,* could overcome the opinion, that wherever there is

* The instructive work of Morgagni, de sedibus et causis morborum, contains the history of several dissections of the bodies of

a puriform discharge, there is an ulcer. But it is to be hoped, that this error will cease, when the direct and accurate observations of the late Dr. Stoll are more generally known. On examining the whole track of the urethra of a man who had died in the hospital, while affected with what was termed a venereal gonorrhœa, the internal surface was observed to be redder than natural; two of the lymphatic vessels were so distended with a white fluid, as to be visible to the naked eye; a puriform matter oozed through the internal membrane of the urethra, especially in the fossa navicularis, which was the seat of the disease; but there was not the slightest appearance of ulcer or excoriation. Many practitioners besides myself, who are interested in the advancement of the profession, have confirmed the observation by examining the dead body, and have noticed similar effects from the virus in this spot, and higher up the urethra.

From what I have stated, I think I may confidently advance the following as established facts.

1. Blennorrhagia is a local disease, and consequently, rarely affects the whole system.

2. The opinion, that the running proceeds from an ulcer of the urethra, is erroneous. In fifty cases of blennorrhagia following an impure connection, a real ulcer will

men, who in their life-time had contracted frequent blennorrhagias. In many, not the slightest cicatrix was discovered in the urethra; in those who died after having suffered successive attacks of the disease, strictures were found in one or more places in the urethra, not so frequently excrescences or protuberances in this canal; sometimes ulcers, sometimes the cicatrices of old ulcers, or the obliteration of the ducts of the mucous glands, or a scirrhous of the prostate; finally, the bladder was found diseased, and altered in its structure.

not occur in one. The disease is a mere superficial or erysipelatous inflammation of the internal membrane and of the mucous lacunæ; or of the orifices of the excretory ducts of the urethra in men; of the internal membrane of the labia externa, the nymphæ, or of the vagina, in women. It may be justly compared with the inflammation affecting the mucous membranes of the nose and lungs in catarrhs.

3. The matter discharged, though apparently purulent is not true pus, much less corrupted semen, as many physicians and patients have imagined. Serapion and the other ancient writers, chiefly Arabian, have reasoned on this subject in the same manner as the European physicians did, till within the last fifteen or twenty years. Observing a puriform discharge from the urethra, they have uniformly supposed and confidently asserted, that it was corrupted semen or genuine pus, proceeding from ulcers within the urethra. Nevertheless, in general, it is only mucus secreted in a preternatural quantity, and altered in its colour and consistence by the virus applied to the parts, in the same manner as happens with the mucus secreted from the nose in catarrh. This being established, it is no longer surprising that the patient, at the end of several weeks or months should be so little enfeebled by the copious discharge frequently observed in blennorrhagia. If the matter discharged were pure pus or mense, the strength and constitution would certainly be more affected in cases of blennorrhagia.

4. To characterize the specific nature of syphilitic blennorrhagia, and to distinguish it with more precision from every other blennorrhagia, I have stated that the running is produced by the irritation which the syphilitic virus occasions in the parts affected.

As these positions are highly important both to the patient and the practitioner, and as they have been called in question by many modern writers, I have deemed it necessary to examine the subject thoroughly; more especially as all I have advanced is confirmed by the soundest reasoning, and by numerous facts which I shall now present to the reader.

Some theorists have denied that blennorrhagias from an impure connection, were produced by the immediate application of the virus to the cavity of the urethra. They have contended that the virus was absorbed by the lymphatics of the glans penis, and afterwards deposited in the fossa navicularis, near the frænum. In reply to this, I will remark, that if such an absorption really took place, we should often observe original or primary blennorrhagia seated higher up the urethra, which is perhaps without an example. I have uniformly observed that the seat of the discharge following cohabitation or immediate contact, was always, from the beginning, situated in the mucous lacunæ of Morgagni, near the frænum; and that those which are seated in the curve of the urethra, or further up that canal, in Cowper's glands, &c., from repeated and accurate observations, never occurred in these spots in the commencement of the disease, but were the consequence of some internal cause. The assertion, that the virus cannot be immediately applied to the cavities of the urethra, because the orifice is exactly closed during erection, is founded on vague hypothesis. Hence it is more probable that blennorrhagia, following an impure contact or coition, is owing to virus or acrid matter applied immediately to the orifice of the urethra, whence it is absorbed, or if I may use the expression, sucked into the cavity of the urethra as far as the fossa navicularis, where it meets with the first mucous glands.

The next position I wish to combat, is the hypothesis lately advanced by some of the English writers on the nature of blennorrhagia or gonorrhœa. Observing that discharges from the genital organs frequently occurred without the least probability or even possibility of syphilitic infection, they have asserted that the virus producing gonorrhœa was not the same with that producing shankers, or pox; and that the virus or acrid matter producing a clap, is of a nature essentially different from syphilitic virus; in a word, they have maintained that there is, strictly speaking, no venereal or syphilitic gonorrhœa, and consequently that the existence of syphilitic blennorrhagia is merely hypothetical. They assert, that the virus causing claps, never produces shankers, nor any symptoms of a general syphilitic taint; and that syphilitic blennorrhagia is consequently a mere imaginary disease.

To this I reply, that though we do not very frequently see claps producing the pox, it is not so very unfrequently that we observe, especially in large towns, blennorrhagia followed by symptoms of a general infection. I have certainly seen many instances without there having been the slightest appearance of shankers on the thighs or genital organs; and I doubt not that many attentive practitioners have observed the same thing. Such occurrences are principally observed after blennorrhagia attended with symptoms unusually violent, or where the surface affected was of great extent. On this account they occur more frequently in women than in men.* But of all the cases of syphilitic blennorrhagia accompanied by ulcera-

* At this moment I have three women under my care, with syphilitic ulcers in the throat, the consequence of ill-treated blennorrhagias, which begin to disappear by the internal use of mercury.

tion of the urethra, that have been under my care, I have not seen one which was not followed by symptoms of pox, of the most unequivocal character. The reason why blennorrhagia seldom gives rise to the pox, is, that generally in blennorrhagia the syphilitic virus being applied to the urethra, produces only a superficial inflammation, and seldom causes any excoriations or ulcers which might lead to an absorption of the virus into the general mass of fluids. In fact, the mucous membrane of this canal is defended by a great quantity of mucus, whose secretion is moreover considerably increased when these parts are exposed to any irritation; and as long as the mucus is thus abundantly secreted, the virus is diluted; the sides of the urethra are defended, and consequently, no ulcer is formed. But should this secretion be diminished, either by the violence of the irritation, or by any other cause, such as injections or remedies not adapted to the disease, I maintain from repeated observations, that in ten such cases, nine will be followed by excoriation or ulceration of the urethra; and a general pox will ensue, as certainly, as when syphilitic ulcers have occurred in any other part of the body.

If the secretion of mucus were as abundant between the prepuce and the glans penis, as in the urethra, ulcers would not be more frequent there than in the urethra. In the instances, where the syphilitic virus affects the corona glandis it excites a secretion of mucus more abundant than ordinary; we observe no ulcers, but the tumefaction is considerable, accompanied by a copious discharge of puriform mucus, like what occurs in blennorrhagia of the urethra. From this resemblance it has acquired the name of false gonorrhœa, for which I have substituted that of blennorrhagia of the glans penis.

The same is observable in women, and for the same reason shankers rarely occur in the vagina, always moistened with mucus; they often occur in the nymphæ, and very frequently in the labia externa.

The advocates of this hypothesis maintain, also upon the same principle, that the virus of gonorrhœa never produces shankers, and that the virus of shankers never occasions a clap. According to this assertion, a person who has shankers can communicate only shankers; and one affected with clap can only communicate this disease. I will not assert, that this is not often the case; but repeated observations have convinced me, that the position is far from being well established. I know many instances where persons affected with clap without any ulcer, have communicated shankers, and vice versa. It unhappily occurs but too often that a prostitute, having syphilis in the genital organs, communicates to one man a clap, to another shankers, and to a third both forms of the disease. Often shankers appear during the course, or towards the close of blennorrhagia; sometimes the blennorrhagic running supervenes to ulcers, and even after the latter are healed; at other times we see them occurring together.

Another fact seems to confirm the truth of this position. If a man having a clap, is not careful to keep the glans and prepuce clean, he is often liable, even after the running is considerably diminished, to shankers or syphilitic ulcers, in the end producing buboes and other symptoms of pox, which can be referred to no other cause than the matter which had produced the clap. This is one of the principal reasons why in blennorrhagia we should always enjoin on the patient the necessity of keeping the prepuce and glans penis very clean.

These observations are confirmed by the direct expe-

riment of Doctor Harrison, whose ingenuity and industry have deserved so much from this branch of the profession. Having introduced into the urethra matter taken from a syphilitic ulcer of the glans, he produced a genuine blennorrhagia.

I am aware that in a work lately published in London, these facts have been denied, and that it has been doubted whether ulcers have ever been produced by the matter of blennorrhagia, or of shankers themselves. The author, accordingly, ascribes the clap and shankers, affecting the penis of the same man, at the same time, to two different poisons or acrimonious matters. But I shall consider these assertions as ill founded, till they are supported by accurate and reiterated facts and observations.

To prove that the virus which produces clap, and that which produces a pox, are not the same, they have adduced, that mercury contributes in no degree to the cure of clap, and that all claps may be cured without the use of this remedy.

I allow that it is true, and fully substantiated by well authenticated facts, that not only many claps are cured, but for the most part may be cured, and ought to be treated without mercury. I have seen hundreds of well authenticated instances. Nature alone often cures the disease, if we do not interrupt her operations. I know many cases, where by the use of no other remedy than simple water, a virulent gonorrhœa has disappeared, in the same manner we observe in a common catarrh.

The secretion of mucus from the urethra is increased by the irritation excited by the acrimony of the virus, in the same manner as that of the tears is when a foreign body getting into the eye, irritates that tender organ; with this sole difference, that in the former instance the

irritating body is a chemical stimulus; in the latter, a mechanical one. This copious secretion of mucus dilutes the virus as effectually as any of the remedies that art employs. The virus is thus not only diluted, but in part carried out of the body by the continual discharge of mucus, which serves as the vehicle; and the modern practice by the use of mucilaginous and oily medicines, has no other object than to assist nature in this salutary operation.

Hence it is evident, that when blennorrhagia is unaccompanied by violent symptoms or ulceration, it may be radically cured without employing mercury; and that if it is administered internally in such cases, it will produce no effect on the local disease; not because it is not syphilitic, but because the virus is out of the course of the circulation, and consequently, beyond its action. But this is not the case in syphilitic blennorrhagia, accompanied by ulcers or excoriations; for we learn from every day's experience, that runnings of this kind are not only cured more promptly, but with more certainty, if mercury be employed; and moreover, that they are oftener incurable if this remedy be neglected. Experience also proves, that the habitual runnings which are the common sequel of blennorrhagia, often yield readily to the use of mercury, after having resisted for a length of time a variety of other remedies. I may even assert, that at present we are acquainted with no remedy more advantageous in such cases than mercury.

We do not contend that a clap cannot be radically cured without mercury, and the system not be infected; but it is a great mistake, and fraught with danger to the patient, to believe that a clap can never produce the pox, as Mr. Benjamin Bell has lately maintained.

Several examples have completely convinced me, that the absorption of the virus sometimes occurs in simple syphilitic blennorrhagia, especially when by injudicious treatment a greater extent of the urethra is affected; or when the disease is seated high up the canal, and particularly in the vicinity of the bladder. In women, this accident is still more common. I have seen other patients, in whom the accidental wound of a small blood vessel in the urethra, by the unskillful application of the syringe or of the catheter, has given rise to an absorption of the virus, which has eventually produced very evident symptoms of syphilis in the blood; but which, though proceeding from a gonorrhœa was readily cured by mercury.

We may then conclude, that if there are cases of blennorrhagia which are cured without mercury, there are likewise simple cases of the disease which require the use of this remedy, and cannot be radically cured without it.

As this circumstance is of great importance, both to the practitioner and the patient, I shall relate some observations I have made, and which place the truth of it in a clearer light.

At the age of 24 years, I for the first time contracted a gonorrhœa, without the least appearance of shankers. The running having been imprudently stopped by the use of purgatives, there was a total suppression of urine. I called in a surgical friend, who perceiving that the pain from the distention of the bladder was insupportable, had recourse to the catheter; but the instrument, introduced near to the bladder, could penetrate no further, though the surgeon neglected no means to accomplish his purpose. After waiting some minutes, he made a second

attempt, but equally unsuccessful. But as the pain increased, and as the accumulation of urine threatened a rupture of the bladder, he attempted again, and at length forced the passage with as little violence as possible. This effort caused the discharge of a few drops of blood, followed by a copious evacuation of urine. By suitable treatment, I was relieved in a few days from the alarming symptom; the running reappeared, and at the end of three weeks I thought myself radically cured. But some weeks after, I awoke during the night with a violent pain in the middle of the sternum, which I took for rheumatism: at the end of a few days, the pain became stronger, accompanied with a tumefaction of the bone. I then began to suspect the nature of the disease; I had recourse to mercury, and was soon relieved; in five weeks I was perfectly cured. I now ask any impartial person who has reflected on this history, if it is not reasonable to suppose, that in forcing the passage of the catheter, some vessel was wounded, which gave rise to absorption; so that I was from that moment infected, and afterwards cured in the same manner as if the infection had proceeded from a shanker.

A man about forty years of age, who had formerly contracted repeated claps, of which not the least trace remained for five or six years, contracted the disease afresh. According to his own account, this was mild for the first five or six days, occasioned him no pain in making water, and caused scarce any erection. But then, after having taken violent exercise, he experienced more irritation along the urethra, and particularly at the neck of the bladder. He relied on a mercurial purge, and the rubbing of the mercurial ointment on the perinæum. The symptoms were almost entirely re-

moved at the end of eight days: there remained only a dull pain in the perinæum. But the disease for which he consulted me, was a pain in the xyphoid cartilage, so acute, that he could not bear to have it touched. I advised him to continue for some days the frictions of mercurial ointment on the perinæum. When I saw him again, the pain had not abated; but having shifted its seat, it now attacked the middle of the sternum, and it had been particularly troublesome during the preceding night. I administered the mercury internally, and he was cured in a short time.

Hitherto, I have confined myself to a refutation of the arguments advanced to prove that the virus which produces gonorrhœa, is different from that which causes the pox; or in other words, that blennorrhagia never proceeds from the virus which produces the pox, or syphilis.

I shall now proceed to a different discussion. While some English writers reason thus respecting the non-syphilitic nature of every blennorrhagia, most of the French physicians and surgeons have maintained, and continue to maintain, in a great measure, a diametrically opposite opinion. According to them, every clap is venereal, or proceeds from the same virus, which, absorbed into the system, produces the pox. Hence the common routine of directing a mercurial treatment, and the rage, if I may use the expression, of giving corrosive sublimate to every patient affected with gonorrhœa.

The sound philosophical scepticism with which I commenced the study of medicine, and which prevented my adopting many of the theories of the professors, has rendered me very cautious in admitting any general propositions in medicine, and has made me especially

doubt the truth of the two preceding assertions. I am convinced that the partizans of both theories have been led into error, as too often happens, by a few facts which have fallen under their notice. They have drawn a general corollary, which in the end has been blindly adopted from one another, by the herd of practitioners who prefer indolent and established routine to the anxious exercises of attention and reflection. Indeed to pretend that the virus which produces blennorrhagia, is never syphilitic, is to say that the syphilitic virus applied to the urethra or vagina, is not capable of producing a running: it is almost the same, as if I asserted that the virus which produces ulcers in the genital organs of both sexes, is always syphilitic; and that no other acrid matter can produce an ulcer.

I had long suspected, that cases of gonorrhœa and blennorrhagia exist, which are not syphilitic, or venereal; not that I am here speaking of a genuine gonorrhœa, or flux of semen, nor of the discharge of the fluid from the vesiculæ seminales, or from the prostate gland; but of those runnings which have hitherto been considered as cases of syphilitic gonorrhœa, or clap. Repeated observations tended to confirm my suspicions. I had observed in stallions and in mares, a greenish yellow discharge from the genitals of those animals, especially when they were in season. I had seen this discharge continue for some days, and then spontaneously cease. I had observed the same in dogs, though the animals did not appear to me to suffer much from this state. Moreover, I had seen that children of both sexes had sometimes, during dentition, from the organs of generation, a running of puriform matter, in all respects like what is termed gonorrhœa.

In the course of an extensive and assiduous practice, I have seen many patients in whom the running, though very similar in colour, consistence, and in other symptoms to syphilitic gonorrhœa, was of such short duration, that I thought it probable that the disease was not syphilitic. I have seen among others, a young man, who at the age of seventeen or eighteen, had two or three runnings, which could not be syphilitic, as he never had had commerce with women. These runnings lasted three or four days, and then disappeared without the use of any remedy.

In other cases, the symptoms which accompanied the running were so mild, or were preceded by such circumstances, that they could not be reasonably attributed to a syphilitic cause. In fact, I have known married persons, living in the strictest fidelity, in whom one was affected with a similar running for several days, without the other's perceiving the least indisposition. Being by my profession intimately connected with some of the families, I satisfied myself, that not only the parties were most faithfully attached, but that their situation in the country, and the persons with whom they associated, rendered syphilitic infection if not impossible, at least extremely improbable.

One of the most enlightened physicians in Europe, lately deceased, with whom I was on terms of friendship, having read the preceding observations, in the first edition of this work, made me a most interesting communication. In his youth he had contracted several claps, of which he had been radically cured for many years. He finally married, and lived most happily with his wife for sixteen or seventeen months. At this period he was affected with a running accompanied with the

ordinary symptoms of a gonorrhœa. As he had no cause to reproach himself, he began to suspect his wife, whom he subjected to a scrupulous examination; but he discovered neither then, nor afterwards, the least indication of the disease. The symptoms after ten or twelve days gradually disappeared of themselves in him, and on the fifteenth day the running had entirely stopt. The same accident occurred to him twice or thrice, and the running never lasted more than a few days. His wife has always enjoyed good health, till a very advanced age; and nothing has disturbed their conjugal happiness; the fruits of which have been a numerous progeny. I will just observe that this lady died at the advanced age of sixty-eight or seventy, of a cancer of the uterus, with which she had been affected for near ten years.

From these united observations, could I fail to be convinced that certain runnings, originated from a cause, whether internal or external, distinct from syphilitic virus? Was it not natural to infer, that any virus or stimulus whether syphilitic, or not, provided it possessed sufficient powers, or acrimony to excite irritation, and consequently, an extraordinary secretion of mucus from the urethra or vagina, might readily produce a running resembling gonorrhœa, in the same manner as in catarrhs of the head and breast, the action of a cause, certainly differing from syphilitic virus, produces a secretion more copious, and of another colour, than the mucous membrane of the nose and lungs furnish in the natural state. Nevertheless to remove all objections, and firmly to establish a principle in my mind highly interesting to humanity, and especially to a scientific physician, I determined in 1782, to make a direct experi-

ment on myself. I proposed to inject a portion of a very acrid fluid into the urethra, and to watch the result.

With this view, to six ounces of water, I added enough of ammonia (caustic volatile alkali) to give the solution a pungent burning taste. I injected it at eight in the morning, compressing the urethra with one hand behind the frænum, that the liquor might not penetrate further, and that it might reach the spot which is commonly the seat of syphilitic gonorrhœa. The moment the liquor touched the internal surface of the urethra I experienced such intolerable pain, that I could not retain the injection beyond a second. I involuntarily withdrew the syringe, almost the instant I had injected, and the injected fluid was returned.

But though the pain was very acute for seven minutes, I resolved to make a second attempt; it occasioned the severest pain I had ever felt in my life. Nevertheless I retained the injection nearly a minute; the pain then became so severe, that I could bear it no longer, and I withdrew the syringe. I experienced at the time a very strong desire to make water; but as I had taken the precaution to void my urine previously to injecting, I resisted the inclination. I laid down on the bed, and patiently waited the event. The pain was so severe, that near an hour elapsed before I was able to move. I employed the remainder of the morning in reading; I dined as usual, and went to bed early. I was then obliged to make water which I had not done since I injected the fluid. When the urine reached the spot where the injection had lodged, I experienced severe pain, but less than I expected.

Having passed a good night, I was anxious, on waking the next morning, to examine the part. I discovered

a considerable discharge of puriform matter, of the same greenish yellow colour with that of virulent gonorrhœa; the pain occasioned by the passage of urine was increased, and the following night my rest was disturbed by painful involuntary erections. On the morning of the succeeding day the discharge was much more abundant, and nearly of the same colour, except that it had an increased greenish tinge; but I then experienced such a scalding in making water, that I determined to allay it by injecting a little warm oil of almonds, which instantly afforded relief. The running continued for five days, and the pain abated in a remarkable manner during that period. But it gave me great uneasiness, that I experienced the effects of another inflammation higher up the urethra, in a part where I had never felt it before, and where not a drop of the injection could have penetrated. This new inflammation extended, as appeared to me, from the spot to which the first was confined, to a certain distance up the canal. It was succeeded by a copious discharge attended by the symptoms as before, and lasted six days, after which the symptoms greatly abated.

But what was my surprise, when after this I very distinctly perceived the symptoms of a new inflammation, which appeared to extend from the limits of the preceding one towards the *veru montanum*, as far as the neck of the bladder, followed by a scalding in the urine and by a running as abundant as the preceding. At the time I was seriously alarmed, for the injection with oil of almonds had been continued three times a day. I perceived that the inflammation excited by the ammonia was very evidently communicated from one part of the urethra to another; from which I apprehended that an

inflammation of the whole internal surface of the bladder might ensue, which would be attended with dangerous consequences. I remained in this state, between hope and fear, for seven or eight days; but at length I perceived to my great satisfaction that this inflammation and discharge gradually subsided, without extending beyond the urethra; and I was entirely relieved of all the symptoms of these three claps, as I may with reason call them, at the end of six weeks.

To the observations and experiment above related, I will add a very curious fact recorded by Doctor Oettinger, some years ago, in a thesis published at Tübingen. This physician mentions that a person having swallowed some olive oil in which a quantity of cotton dyed with Turkey red had been steeped, perceived soon after a running from the urethra which had all the appearance of a gonorrhœa. Pepper, guaiacum and some kinds of beer often produce similar discharges.

From these facts it is evident, that there exist acrimonious substances, which, taken internally, are capable of producing the same symptoms, which the ammonia applied externally, produced in my experiment. I think it a very legitimate induction, that virus, whether herpetic or leprous, a cancerous ichor, or any stimulus applied externally, or internally, may produce the same effect, and that such cases of blennorrhagia resemble perfectly claps produced by the syphilitic virus, allowing that in some cases, the symptoms are milder and of shorter duration. Nevertheless, in the experiment performed on myself, I could perceive no difference between the symptoms of that running, and those which commonly attend syphilitic blennorrhagia; nor do I doubt that there are runnings produced by mechanical

irritation, as coition, and masturbation. I have been likewise convinced in the course of my practice, that many runnings not syphilitic, which we have just noticed, are equally infectious; and I am very ready to believe, that the runnings, which many ancient writers have described, belong to one of this kind. On combining these observations, and the inductions which appear to me legitimate, I have founded the following divisions of blennorrhagia.

1. Blennorrhagia syphilitica, produced by the syphilitic virus, either communicated by coition with an infected person, or by contact; or lastly, by deposition from the mass of the blood in the urethra, through the medium of the circulation.

This disease is either simple or complicated; that is, without excoriation, or accompanied by ulceration of the urethra; in the latter case, the matter discharged is often real pus or an ichor, (blennorrhagia complicata, seu ulcerosa, *s. pyica*.) This distinction is of the first importance in practice, for blennorrhagia with ulceration always requires for its radical cure the internal exhibition of mercury.

2. Blennorrhagia herpetica, leprosa, scorbutica, &c. The gonorrhœa mentioned in Leviticus, as well as many cases related by those authors who wrote previously to the appearance of syphilis in Europe, ought to be ranked under this head. The herpetic virus, &c. at the present day, often affects the uterine system, and is discharged with the menstrual fluid; or it produces a genuine herpetic blennorrhagia, &c. sometimes communicable by coition. I have seen several striking instances.

3. Blennorrhagia arthritica, proceeding from a gouty

humour, deposited from the mass of blood in the urethra. I frequently meet with such cases in my practice.

4. *Blennorrhagia rheumatica, s. catarrhalis*. This kind varies according to the situation it occupies in the urethra, bladder, uterus, vagina, or rectum. It is a genuine catarrhal inflammation of these parts, resembling in all respects the catarrhal inflammation of the mucous membrane of the nose, or lungs, &c.

5. *Blennorrhagia* produced by some substance taken internally, or externally applied to the urethra, if it is capable by its acrimony, or stimulating power, of producing inflammation and discharge from the urethra. The runnings produced by pepper, guaiacum, or other acrid substances are of this class.

6 *Blennorrhagia a stimulo mechanico*, which is the consequence of a violent strain in coition, and sometimes of masturbation. *Blennorrhagia distortionis*.

7. *Blennorrhagia sympathetica*. The swelling of the hemorrhoidal vessels is a frequent source of irritation in the urethra, bladder, vagina or womb, and vice versa, by sympathy, or a direct communication is made with these cavities. In either case there is a discharge of puriform matter. It appears likewise that the ascarides, by the irritation they occasion in the rectum, may give rise to a blennorrhagia from the genital organs.

The blennorrhagia of children, which sometimes accompanies dentition, (*Blennorrhagia dentitionis*) is referable to this head.

Besides the foregoing causes, there may be many others hitherto unknown; which may sometimes produce blennorrhagia. I know that the guaiacum officinale, taken internally, has produced in some men a discharge from the urethra exactly resembling blennorrhagia. The use of pepper I have been informed frequently

produces the same effect. From washing the parts with water impregnated with common soap, and especially from injecting such water after coition, there sometimes follows a running with scalding, which the patients or practitioners improperly consider as a virulent gonorrhœa. I have seen a blennorrhagia of the glans penis, produced by the imprudent applicaion of the phagedenic lotion; and I have often seen blennorrhagia produced in women by injections of the same remedy.

All these cases of blennorrhagia ought to be accurately distinguished in practice,—

1. From blennorrhœa, or running from the urethra, which is not accompanied with inflammatory symptoms, commonly called gleet. The matter in blennorrhœa ropes between the fingers, and leaves a stain on the linen which is easily effaced, while the matter of blennorrhagia never ropes, and leaves a stain on the linen which cannot be removed by mere rubbing.

2. Gonorrhœa propriè sic dicta, consists in an unnatural and habitual discharge of semen, of the fluid of the vesiculæ seminales, or of the mucus of the prostate without erection or any pleasurable sensation. This discharge from the prostate has a peculiar, very characteristic faint smell; and is the consequence of debility induced by masturbation. It usually terminates in *tabes dorsalis*.

3. Pyuria, a truly purulent, or only puriform discharge from the bladder or kidneys. In this disease there is no discharge of matter, but with the evacuation of urine, and never any during the night.

In women we must distinguish besides the cases of blennorrhagia which are common to them and men, those which arise, 1. from an ichorous or purulent discharge of a cancerous ulcer, or a syphilitic ulcer in the uterus or va-

gina. 2. From the discharge which many women are subject to, before or after the catamenia, and which often continues so long, that it does not stop in the interval between the menstrual periods. This disease is often the consequence of local debility. 3. From the discharge from the uterus or vagina, known by the popular name of whites, (*blennorrhagia habitualis*, seu *fluor albus benignus*,) which is generally a constitutional disease, and in general the effect of full diet, and a sedentary, indolent life.

It is principally from inattention to this distinction between syphilitic blennorrhagia and that proceeding from other causes, that among practitioners, there prevails such a diversity of opinion respecting the mode of cure. Some recommend stimulating and astringent injections, while others advise the oily and mucilaginous. Some extol balsams and diuretics, while others prefer the frequent repetition of cathartics. Some prescribe mercury, while others pretend that every clap may be cured without the use of this remedy. In a word, it is for want of such distinction, that a general and certain mode of treatment has never been established. By bearing in mind the distinction which we have established, and by reflecting on the opposite quality of the remedies proposed for the cure of clap, we clearly perceive why either class of remedies, empirically administered, will succeed in some cases, while in others they prove inefficient, injurious, and even sometimes dangerous.

The practitioner who is unmindful of these essential distinctions, not only risks his reputation, but frequently endangers the union and happiness of innocent persons. A husband who discovers that he is attacked

with blennorrhagia, (or ulcer of the genital organs) which the physician pronounces to be syphilitic, will not fail to accuse his wife; and the wife, though conscious of her innocence, will not be able to exculpate herself in the eyes of her husband. From all these reasons, I cannot too forcibly recommend, especially to young physicians and surgeons, never to pronounce hastily, or on slight information, respecting the nature of these diseases, when they are called upon to give advice; and to bear in mind, I repeat it, these necessary distinctions.

I readily agree, that it is in general very difficult to determine to which class such or such blennorrhagia appertains: for we are not acquainted with the characteristic signs by which to distinguish the different kinds; and, however different the cause, they are nearly all accompanied by the same symptoms. Yet, the short continuance of the running in some cases; the lightness of the symptoms; the attending circumstances, such as the health of the patient, or his predisposition to certain diseases, previous to the attack of blennorrhagia; the symptoms which occur after the running has ceased, often without the use of any remedy; and finally, an examination into the physical and moral character of the parties, and of the circumstances which accompany or follow the disease, will enable the practitioner to form a correct judgment in most cases. Besides these considerations, it appears to me from the observations I have made, that we may consider as symptoms exclusively belonging to syphilitic blennorrhagia, the swelling of the testicle, the inflammation of the prostate, ischuria, and perhaps the sympathetic swelling of the inguinal glands, when these symptoms occur, without any other obvious cause in blennorrhagia.

The prognosis in blennorrhagia is favourable, when the symptoms of irritation and inflammation, such as scalding, and frequent desire to make water, and the pain during erection are neither very violent, nor of long duration. The disease abates, when the running diminishes and becomes thicker, and of a white colour. We know that the inflammation is entirely removed, when the chordee, and ardor urinæ, have totally ceased; when the desire to make water is not more frequent than natural; when the running which is lessened, assumes a thicker consistence, becomes gluey, and ropes between the fingers; when the patient feels neither pain nor itching in the urethra.

I must however remark, that the colour of the matter discharged from the urethra or vagina, can never serve as a prognostic; and though, as we have stated above, the change to a white from the sulphur colour, possessed by the matter in the beginning, is a favourable sign, it is however not a certain one that the virus is destroyed; and ought never to induce the belief, that the running is not infectious, as is generally supposed. I have observed to the contrary in many patients, that the matter retained its greenish yellow colour long after the inflammatory symptoms had disappeared, and even to the close of the disease. Besides, we believe that no practitioner would advise, and no honest person would, on mere conjecture or probability that the matter was no longer infectious, hazard the communicating the disease to a sound person, by an impure connection. While the slightest running exists, the patient risks, by a premature connection, not only the aggravation and prolongation of his own disease, but the communication, often against all probability, of the disease to a person

whom all his life he may regret having infected, by a momentary indiscretion.

The prognosis is very unfavourable, when the symptoms of irritation are violent; when the inflammation extends high up the urethra; when there are streaks of blood in the running; when there is an ulcer in the urethra; when there is swelling of the testicles, or affection of the prostate; or when the bladder is affected, especially if the patient is of a sanguine temperament, or of a very irritable constitution. The inflammation may be continued, by the patient adopting an improper regimen, or by an injudicious treatment being prescribed.

Of two men of nearly the same temperament, attacked at the same time with blennorrhagia, communicated by the same woman—the one who lives regularly, will be cured in a few weeks; while the other, who gives himself up to debauchery, drinking, or violent exercise, or who shall expose the affected parts to frequent injury, will retain the disease for months or years, and by this conduct, runs the risk of getting the pox.

The question has been proposed, how long the running would retain the power of communicating the infection.

The solution of the question is of the highest importance. The happiness of a family may depend upon it. Hence it is essential, that the physician should not hazard an opinion, as regards the nature of the running; especially, while there exist no characteristic symptoms by which he can distinguish *a priori*, the cases of syphilitic blennorrhagia, from those arising from herpetic or leprous poison, from the gout, or any other acrimony. For a running produced by these latter causes, may

likewise be sometimes infectious; though the infection which they communicate, differs from that generated by the syphilitic virus.

Generally, the women accused of having communicated this latter disease, strenuously deny the fact. Often they are ignorant of their being infected; they receive the germ of the infection without knowing it; and the virus, though lodged in some part of the vagina, has not been manifested by any symptom.

The physician, to act correctly on these occasions, ought to pronounce that every running from the urethra or vagina, especially when accompanied by inflammatory symptoms, may communicate an infection, or produce in a healthy person an irritation followed by running, or by ulceration; and that this disposition will continue, while the slightest appearance of the running remains. For though there may be a precise period, when such a running ceases to be infectious, as there is not any mark by which we can ascertain this period, it is always most prudent for the physician not to rely on probabilities, but to declare frankly that every copulation is dangerous while the slightest running remains, though all the inflammatory symptoms have been for a length of time removed. I have seen more than one instance of the propagation of disease in similar circumstances.

Having stated the observations which I had to make on the nature and different kinds of blennorrhagia, I shall proceed to treat of the method of cure.

Method of Cure.

Every syphilitic disease, when left to itself, impairs and destroys the constitution. Syphilitic blennorrhagia alone may, and does indeed, sometimes cease naturally and without the assistance of art, provided that while it continues, the patient leads a sober and regular life. For as we have already remarked, not only the copious and continual secretion, excited by the syphilitic virus, prevents its action on the surrounding parts, but the running gradually eliminates the virus. This perhaps is the event in every case of simple syphilitic blennorrhagia, as well as in every one dependent on any irritating matter, communicated by external application; but this is far from being constant in syphilitic blennorrhagia. The irritability of the urethra, the constitution of the patient, the errors in diet, exercise, or in the choice of remedies, and perhaps the nature of the virus, more or less acrimonious, and whose action is more or less violent, frequently render this kind of blennorrhagia a violent disease, as it is complicated with ulceration, which becomes the source of many complaints, which sometimes continue during life.

Hence the propriety of administering the remedies which are adapted to the nature, the violence and the progress of syphilitic blennorrhagia. Experience proves that the sooner the appropriate means are applied, the sooner the patient will be cured, and the less he will suffer, and the more certainly he will avoid the dreadful consequences so frequently attendant on this disease.

With this view, there can be no doubt that it would be very advantageous, either to prevent the disease

entirely, or to destroy it in the beginning. For this purpose two methods have been proposed: one to remove the virus, before it has acted on the parts immediately exposed to the infection; the other to destroy or counteract its nature, and prevent its effects, the moment its action appears in the sound part to which it has been applied.

With this intention several practitioners, especially in England, have tried and recommended different prophylactics. Some have preferred mercurial ointment applied to the whole surface of the glans, and præpuce previous to coition: others have extolled different lotions and injections after copulation; some the caustic potash, or lime water; others alcohol diluted with water, mercury, cold water, vegetable astringents, and metallic salts: these preparations they injected seven or eight times a-day, for several days, from the commencement of a running of this nature. Other practitioners have recommended with the same intention, the topical application of mercurial ointment, or of the muriate of mercury; others the infusion of flaxseed with the acetite of lead, or a solution of the acetite of lead with opium, or a solution of the muriate of ammonia and opium in water; lastly, others a solution of the ammoniacal oxide of copper, or the sulphated copper diluted with a large quantity of water. All these remedies have been proposed and recommended for the purpose of altering or destroying the syphilitic virus in the beginning, or to counteract its action either by diminishing or changing the irritability of the membrane of the urethra.

If by these injections we succeed in allaying the irritation or in arresting the progress of the inflammation, and that the running becomes thicker during their

continuance, we shall accomplish the destruction of the disease, by taking care to continue the use of these means, six or ten days after the running has ceased. If we desist too soon in the use of injections, the inflammation and running will increase. In this case it is necessary either to increase the strength of the injections, or to repeat them more frequently. According to these observations it appears to me that these injections succeed sometimes not merely by counteracting the syphilitic virus, as is generally believed; but probably also by changing or destroying at the time the nature of the virus itself.

I have not acquired sufficient proof from my own experience of the good effects of this method, or of these remedies to recommend them with confidence. Some of my patients to whom I had proposed the trial would not attempt it; being alarmed at the idea of the danger, which they thought their friends had run in using injections: and others would not continue the use on account of the pain and uneasiness which they experienced, and which they attributed to the use of these remedies. It is desirable, however, that some well informed and cautious practitioners would make some decisive experiments to determine if these injections are generally injurious in incipient blennorrhagia, and if consequently they ought all to be rejected, or if any are really beneficial and capable of fulfilling the intention proposed. For in this case they would prove a very great acquisition in practice, since they would afford the means of preventing the inflammation of the urethra, and all the unhappy and even dreadful consequences so often resulting from syphilitic blennorrhagia.

What I have stated respects the incipient state of the

disease, or blennorrhagia considered at the period when the virus has not had time to produce all the effects of irritation and inflammation. But when the inflammation is established, and the running and other symptoms have taken place, another plan must be pursued. Modern writers have recommended very different methods and remedies; some advise the use of mucilaginous and oily medicines, others sedatives, some stronger or milder purgatives, repeated every three or four days; lastly, others various diuretics, balsams, stimulating, sedative, astringent, injections, &c. Every one pretends to have observed good effects from his favourite plan. And lately we have seen John Hunter first decrying in his work these different remedies and modes of treatment as insufficient or injurious, and then recommend them like an empiric, and advise the successive use of them in obstinate cases.

On commencing the practice of physic, I observed this confusion with regret. I perceived that it was partly owing to the want of having precisely determined the nature of the disease, and partly to the want of having accurately distinguished the temperament of the patient, that many of the remedies recommended, produced by turns good and bad effects. I remarked that this confusion was principally owing to the disposition which unfortunately prevails, with many of the profession, of drawing general conclusions or inductions from partial facts which are often not well established.

I pursued the only course which remained in this and all parallel cases. I abandoned for the moment all I had learnt or read on this disease. I began by examining the nature, and observing the course of the disease as if it had never been known or examined. From the

result of my inquiries and observations, (and I cannot repeat it too often), it appears that the proximate cause of every blennorrhagia, is a local inflammation excited by a virus, an acrid matter, or some stimulus applied to the mucous membrane of the genital organs, and the indications to be fulfilled are the same in every case of blennorrhagia:

1. To change or destroy, if possible, the nature of the virus, or the quality of the acrimony, and consequently to prevent its effects.

2. To remove the acrid matter.

3. To defend the sensible and irritable parts against this acrid matter, and against the irritation occasioned by it.

4. To moderate the irritation and the symptoms of inflammation when they occur.

I have already stated my opinion and what has been proposed in respect to the first indication. I have especially remarked, that to accomplish this end we must first accurately determine in every case the cause and nature of the blennorrhagia.

In respect to the second indication, nature has provided adequately by the abundant discharges, leaving little for the physician to perform, whose principal duty is to leave it to nature or to assist her, and to prevent any interruption to her salutary operations by injurious remedies or conduct. Rest, abstinence from all heating things, as spices and wine; the use of diluting drinks greatly contribute, especially when the patient avoids every thing that might irritate or cause a suppression of the running, such as a heating diet, purgative medicines, exercise, and any local irritation. I shall again resume this subject.

To fulfil the third and fourth indications authors have at all times recommended mucilaginous, oily and sedative remedies. The irritation of the urethra, which, in a man affected with blennorrhagia, is so violent and so different from catarrh or blennorrhagia in other parts of the body, does not depend on the structure of this organ, which has been supposed to be more irritable than the mucous membrane of the nose and other parts of the body; but on the salts which the urine conveys out of the body, and which passing through the urethra must necessarily increase, or at least keep up the irritation produced by the virus. The salts most contributing to this irritation are the phosphats of soda and lime, and particularly the disengaged phosphoric acid which always exists in very considerable quantities in human urine. To moderate the irritation of the urethra they have proposed the internal administration of the solution of gum arabic or flax seed tea, or the decoction of marsh mallows, &c. This method appears reasonable and conformable to the nature of the disease; but I have generally observed that in order that these mucilaginous drinks may produce an evident effect on the urethra it was necessary to take them in large quantities, and that then they almost always disordered or incommoded the stomach considerably. Though I have endeavoured to obviate this inconvenience, by varying or mixing the remedies, I have not been satisfied with the success. The milk of almonds, the syrup of orgeat, and the decoction of pearl barley are subject to less inconvenience; but what perhaps answers better is the infusion of hemp seed. I have satisfied myself that the infusion of these seeds completely fulfils the third indication, and in some degree the fourth, without any

of the inconvenience attendant on the use of other mucilages. This remedy may be rendered more agreeable by the addition of sugar or the syrup of raspberries or of current jelly, and in other cases a light decoction of sarsaparilla may be advantageously employed. All these drinks should be taken cold or at most tepid; often and in small doses: all hot drinks are injurious.

In what respects more especially the fourth indication it is necessary, above all, carefully to avoid whatever might increase the irritation, and consequently the inflammation of the urethra; hence the necessity of ascertaining the temperament of the patient; and of distinguishing the nature and causes of the disease. It must be observed that these inflammations in general and particularly those excited by the syphilitic virus are of that kind denominated by nosologists erysipelatos (phlogosis erythema), and that they do not require so strict an antiphlogistic regimen as genuine inflammation (phlogosis phlegmone. Cullen).

They always partake more or less of either character, according to the temperament, age, sex of the patient, and to the season of the year. The patient being of a robust and sanguine temperament, the syphilitic inflammation will incline more to the genuine inflammatory character. If the patient is delicate, feeble and irritable, the inflammation will assume more of the catarrhal, or erysipelatos character. To mitigate the disease, or to effect its speedy cure, the practitioner must be determined by these observations, and never lose sight of them through the whole course of the disease. On them his success, consequently his reputation, and the welfare of his patients, depend. If he neglects these rules his

practice will have no solid foundation but will be wavering uncertain and empirical.

The inflammatory symptoms, as I have already remarked, are not solely dependant on the virus or acrimony seated in the urethra, but in part on the urine passing along the irritated parts, and often on the diet and irregular conduct of the patient, and sometimes on the remedies little suited, or badly administered, such as the balsams or resins, salts, heating remedies, aromatic or flatulent food, pepper, mustard, beer, especially if not sufficiently fermented; new sweet wines, champagne, distilled liquors, chocolate, especially if flavoured with vanilla; coffee, but above all the frequent handling of the parts, coition, lascivious ideas, complete or incomplete masturbation;—such are the principal causes which separately or collectively, aggravate and maintain the inflammation even after the virus has disappeared.

Those who pretend that every gonorrhœa proceeds originally from the same cause, and ought consequently to be treated in the same manner, and who order all their patients with blennorrhagia the same remedies, and the same regimen, evince that their practical knowledge is extremely limited; or that governed by sordid interest, they are desirous of gaining money with the least possible trouble; whilst the honest and enlightened practitioner will ever consider it his duty, not only to cure his patient, but to cure him by the most certain, easy, and prompt method. Is it not a common observation, that even persons in perfect health derive benefit by observing different rules of living, according to the climate and season? How much more beneficial must it be to a patient, whose irritability is usually so much increased by foreign morbid matter, and whose system is

much more exposed to be affected by the slightest injury from external or internal causes. Do we not daily see, that disease assumes a very different character in different persons, or in the same person at different periods; and that the same remedy, which was serviceable to one patient, proves injurious to another in the same disease; or to the same person in a different degree of the disease in another climate, or at another season. Many of my readers will probably think it useless to dwell so long on this subject, but we see so many of these empirics, and so many the victims of this empiricism, that I shall think it my duty to resume the subject repeatedly, and particularly in the chapters on ulcers and buboes.

The regimen to be observed by the patients in blennorrhagia, consists, generally, in avoiding as much as possible, every thing that can tend to increase the irritation and inflammation, as we remarked above; especially exercise, exposure to cold, high seasoned food, the use of spirituous liquors, purgatives, diuretic food or remedies, &c. irritating injections, and all kinds of local irritation. These rules are particularly applicable to those of a sanguine temperament, because they usually suffer more, and for a longer time from this disease. Such patients ought to confine themselves to a light diet, rather vegetable than animal, avoid suppers, warm beds, and to drink only cooling and mucilaginous fluids; while those of a different constitution, need not be subjected to such severe restrictions.

In all cases, I advise the patient, from the commencement of the disease, to wear a suspensory bandage during the whole course of blennorrhagia; that is as long as the inflammatory symptoms remain. Though this

precaution may appear superfluous, yet the suspensory, if well made, is attended with so little inconvenience; and I have found it so serviceable in preventing tumefaction of the testicles, that I never omit to recommend it, especially to those who have formerly experienced this accident. In persons whose condition requires exercise, the best way of preventing, particularly in cold climates, any unhappy consequences, such as paraphymosis, swelling of the testicles, disease of the prostate, or of the neck of the bladder, suppression of urine, &c. is to wear round the penis a suitable bandage, to be united to the suspensory, so as to enclose the penis, and defend it from the external injuries of cold, and of the friction in walking. This bandage and bag must be kept constantly clean, by renewing the lint placed in its cavity. A hole is to be left in the end of the case or bag, covered with lint, which the patient will remove, whenever he goes to make water, taking care to renew it each time. In order to prevent the distressing consequences from syphilitic blennorrhagia, especially in cold climates, I would propose that the patient should wear a compressing bandage to the urethra applied near the scrotum, beyond the usual seat of the disease; but never having tried this plan, I leave it to judicious practitioners to pronounce on its utility.

Another general precaution to be observed by the patient, is to keep the penis pendulous during blennorrhagia, in order that the matter may constantly have a free discharge from the urethra, and may never regurgitate.

Patients who have the glans naturally covered with a tight prepuce, should introduce between these parts a small quantity of mercurial ointment twice or thrice

a-day, from the commencement of the disease. I have seen very good effects from it in preventing shanker, phymosis, and paraphymosis; these observations have induced me to recommend it to the serious attention of practitioners.

Many writers formerly recommended neutral salts, to excite the secretion of urine. They thought by this means to allay the inflammation, and to assist nature in expelling the virus. But I have uniformly found, that the administration of these remedies was very injurious: for these salts, and likewise some other diuretic medicines, increase indeed the secretion of urine, but not the secretion of mucus lubricating the urinary passages; on the contrary, by imparting to it a more saline and acrid quality, they increase the irritation in the urethra, without producing any of the good effects ascribed to them. The infusion of parsley, the decoction of soapwort, and according to circumstances, the antiphlogistic powder, (*pulvis ad blennorrhagiam ph: syph.*) are the only diuretics, which can be advantageously used.

Another prejudice has prevailed, in favour of purgatives in blennorrhagia. Some have employed the milder cathartics or laxatives, others the more drastic purges: the muriate of mercury given every two or three days, has been particularly recommended. I have never seen any benefit, but frequently disservice, from the use of these remedies. These cathartics, besides tending to facilitate the absorption of the virus into the mass of blood, frequently occasion a swelling of the testicles, diseases of the prostate, and a suppression of urine, &c. But though purgatives ought not to be given, yet the bowels ought to be kept open, so that the patient may have a regular stool every day, or every other day, which

may be effected by a simple clyster, or the internal use of castor oil, or of laxative pills. I have no doubt that it is owing to the useful changes lately introduced in practice, that we so rarely see the distressing consequences formerly so frequently observed in blennorrhagia, judging from the histories given by several writers.

The foregoing observations relate to the ordinary course of blennorrhagia. When the symptoms of irritation and inflammation are more violent, recourse must be had to other means.

If the symptoms of genuine inflammation are considerable; if the pulse is hard and frequent, &c. bleeding is useful, and sometimes absolutely necessary; but generally, better effects are produced by topical bleeding, by means of leeches applied to the penis, and under particular circumstances, to the perinæum; or for want of leeches, by scarifications. The continued application of warm, emollient, and sedative fomentations, or cataplasms, are likewise beneficial. But they must be changed as often as they grow cold, for when cold they do more harm than good: the addition of a little oil or lard tends to preserve the warmth and moisture of the cataplasm. Generally, however, their use ought not to be continued beyond a few days; for fear of inducing too great relaxation, and thus prolonging the disease. Rest, and total abstinence from meat and spirituous liquors, are absolutely necessary in violent cases. The infusion of hemp seed or some oily emulsion, will constitute the patient's beverage: mucilaginous or oily injections are to be given every day; and in some cases, the antiphlogistic powder, (*pulv: ad blennorrhagiam ph: syph.*) may be administered with great advantage.

This powder, composed of camphor and the nitrate

of potash, produces, however, like most active remedies, different effects in different individuals according to the difference of constitution, sex, &c. Some persons bear it well during the period of inflammation; others, and principally women of an irritable habit, cannot bear it; and I have seen some patients, who after using the powder for some time perceived an unusual heat in the body, a disagreeable affection of the stomach, a colic or diarrhœa, headach or general uneasiness. In all these cases, the same precaution must be observed in respect to these powders which the intelligent and attentive physician practices in other diseases respecting other remedies. The moment they produce any unpleasant effects, he desists from their use entirely, or for some days; never persevering in the use of a remedy which is not beneficial.

In the East Indies the Hindoo physicians employ in blennorrhagia a plant called Muchucunda in the Sanscrit. They infuse a single flower of the recent plant, during a night, in a tumbler of water, which by the morning forms a cooling mucilage, of great service in blennorrhagia. It is to be regretted that this remedy has not been introduced in Europe, the more so as it is asserted that the same flower when dried and used in fine powder as snuff instantly removes nervous megrim.

Camphor in the form of emulsion with sugar, or with a fresh egg, is efficacious in mitigating the scalding and pain in making water. Camphor employed externally as well as internally, has been recommended for preventing the erections so frequent in blennorrhagia.

The oily and mucilaginous remedies, and the general antiphlogistic regimen, are to be continued till the pain and other symptoms of irritation in the urethra are en-

tirely or nearly removed. The use of the former may be gradually or totally laid aside, and a less strict regimen may be recommended for fear of disposing the urethra to chronic blennorrhœa.

Some practitioners in England employ in blennorrhagia, injections made with the white oxide of zinc, dissolved in acetous acid, mixing twenty drops of the solution with four ounces of distilled water. They assert that this remedy immediately allays more than any other, all inflammatory symptoms, as ardor urinæ, chordee, &c., and that it likewise destroys the venereal appetite, and for a long time prevents the erections: but this requires confirmation.

Injections made with a watery extract of opium and the acetite of lead, lately recommended by Dr. Alexander Hamilton, one of the most enlightened physicians of England, frequently applied from the commencement of the disease, contribute greatly to sooth the patient and to abridge the disease. Nevertheless the mildest injections, even those made with warm oil, may prove injurious, on account of the peculiar irritability of the urethra, or because few patients know how to use them properly. If their use be judged proper, great care must be taken not to distend the urethra, otherwise they will do more harm than good by the irritation they occasion. Great advantage has been derived in violent cases from frictions of mercurial ointment along the track of the urethra, on the perinæum; on the inside of the thighs; or from mercurial fumigations applied to the genital organs, and from mercurial ointment injected into the urethra.

On the other hand when symptoms of irritation and of erysipelatous inflammation predominate; when the

patient is of a feeble or very irritable habit, if he is better after dinner, if the running is clear and copious, accompanied by a sharp and sometimes lancinating pain in the urethra, if the pulse is weak and frequent, I have found it more advantageous to put him on a less severe diet, to permit the moderate use of wine, and in some cases to give bark and opium internally. In such instances this plan does more good than the whole catalogue of antiphlogistics. A dose of opium taken at night, or given in a glyster with oil, or in injections with the acetite of lead, is particularly serviceable in such cases. We are often surprized with the sudden change for the better produced by these remedies combined according to circumstances, with the external applications already indicated. The exhibition of opium contributes also greatly to prevent painful erections. But we must always endeavour to prevent their recurrence by tying down the penis at night, and directing the patient to lye on his side on a hair matrass, not on his back nor on a feather bed.

If the erection is accompanied by a strangulation of the glans, recourse must be had immediately to the treatment indicated in the chapter on paraphymosis.

We need not be alarmed if an hemorrhage occurs, as is often the case, during the violent and painful erections. Generally it ceases of itself and relieves the patient. When it continues a longer time, and might induce exhaustion, we must endeavour to stop it by compressing the urethra behind the place whence the blood flows. Should this not succeed we must employ astringent injections, and in the more alarming cases, injections of the oil of turpentine.

If in consequence of the violence of the inflammation,

the running stops, and the parts higher up the urethra become affected, the patient should be placed in a warm bath, or vapour should be applied topically, by seating him in a chair with an opening in the seat in which has been placed a vessel containing boiling water, to be repeated three or four times a day, not omitting the application of the suspensory bandage. The patient must keep his bed, and apply to the penis emollient and sedative cataplasms, to be renewed every hour or half hour. These means, to which a sedative glyster may be added at night, I have found the best adapted for restoring the running. I have generally found injections of every description evidently injurious in this state: they increase the irritation, and we shall have no cause to regret not employing any till the inflammatory symptoms have subsided, and the blennorrhagia is converted into blennorrhœa. The same treatment is proper when the running has been checked or suppressed during the period of inflammation, by acrid or astringent injections, or by suitable injections unskillfully applied, or by drastic purges or mild cathartics too often repeated, by the internal and premature use of turpentine and balsam; by violent exercise or by cold applied to the affected parts. If Cowper's glands are inflamed mercurial frictions on the perinæum are useful, and if they suppurate they must be treated as a bubo.

When the prostate gland, or the neck of the bladder is affected, and the patient is of a robust and plethoric habit, it is necessary to bleed freely or to apply leeches to the perinæum. In all these cases a sedative glyster repeated every seven or eight hours, and a general or topical warm bath, twice a-day, are the best means which can be employed. Sometimes a blister applied

to the perinæum proves highly beneficial. See chapter on Ischuria.

The buboes which occur during blennorrhagia are for the most part sympathetic, or in other words are simply owing to an irritation of the urethra, without the virus being absorbed or lodged in the gland, and disappear with the blennorrhagia. There are instances, however, where the virus being absorbed and conveyed to the inguinal glands, produces a genuine bubo which must be treated in the manner indicated in Chapter XI. As regards the paraphymosis and phymosis which sometimes accompany blennorrhagia, see Chapter VI.

Syphilitic blennorrhagia of the glans penis (blennorrhagia balani), or a puriform discharge from this part, particularly from the corona glandis, is always easily cured by the application of mercurial ointment, and by frequently washing and bathing the affected part with warm milk, or in some cases with lime water, and defending the part against cold, by the application of warm cataplasms. When the prepuce is so much swelled as to prevent its retraction behind the glans, and to preclude the lotions being applied, recourse, must be had to sedative injections, and the introduction of mercurial ointment between the glans and prepuce must be attempted, which is more particularly necessary, if there are any shankers concealed. If these do not readily yield to the use of the ointment, of the injections, of lint moistened with the phagedenic lotion (lotio syph: lutea ph: syph:) the prepuce must be divided to prevent the ravages of the syphilitic virus, and to admit the application of suitable remedies.

A precaution to be strictly observed in every case of blennorrhagia, is to handle the affected parts as little as

possible, and to be always very careful to wash the hands immediately after, lest by inadvertently touching the eyes and nose, a fresh inoculation be produced.

In ordinary cases of blennorrhagia, where the symptoms are mild, the use of mercury is not required; but in every case of syphilitic blennorrhagia, accompanied by obstinate and violent symptoms, especially in women, it is prudent to exhibit mercury for ten days or a fortnight, during the course of the disease, or towards the close, in order to prevent the system being infected. This precaution is indispensable, if the discharge has been tinged with blood, or if an hemorrhage has occurred, and principally when there are evident signs of ulceration, for in such circumstances there is no certainty that the syphilitic virus has not been absorbed and conveyed into the circulation. If the blennorrhagia is the consequence of a deposition of virus from the circulating fluids a mercurial treatment is indispensable.

Blennorrhagia occasioned by a chemical stimulus, or other acrimony applied to the urethra, and those cases proceeding from cantharides, acrid diuretics, drastic purges, the use of some kinds of beer, &c., generally disappear without the assistance of art, or they may be mitigated by the administration of oil or mucilage. Those which originate from an internal cause, as the gout, herpes, lepra or scurvy, &c. require, as being purely symptomatic diseases, internal remedies appropriated to the nature of their primitive cause, or of the original diseases. Those produced by the swelling and irritation of the hemorrhoidal vessels, which are unloaded by the discharge of a mucous, or glarey fluid from the bladder and urethra, commonly disappear in a

short time, while they remove the principal disease. Sometimes sedative glysters and injections are very useful; but a simple decoction of poppy heads, or an aqueous solution of opium ought only to be used, for the resinous part of the opium is likely to irritate and to aggravate the disease.

Before I close this chapter I must notice a very horrid and criminal prejudice prevailing with many young persons, affected with blennorrhagia; it is the opinion they entertain, that by lying with a healthy person, or what is still more criminal with a virgin, they will be relieved of the disease. It is asserted that the inhabitants of Africa, propose the same advantage from a connection with a she ass. How low is man sunk by ignorance and superstition!

The consequences of this brutal conduct is dreadful to both parties. The woman becomes infected; in the man there is an aggravation of all the symptoms of irritation in the urethra, very often a violent hemorrhage, an ulcer in the urethra, an extension of the inflammation of the membrane lining the urethra to the prostate and neck of the bladder, and sometimes an absorption of the virus into the mass of the fluids, and in the end often an obstinate blennorrhœa.

By many practitioners, especially in France, the opinion is almost generally entertained, that gonorrhœa cannot be cured without the use of mercury. The young practitioner, who has acquired an accurate and distinct idea of the nature and seat of the disease, perceiving on the one hand that very few cases of blennorrhagia are attended with ulceration; and on the other, that the mercurial treatment contributes in no degree to render the cure of blennorrhagia more simple, certain,

or expeditious; but on the contrary tends to debilitate the patient, and to expose him more frequently to distressing consequences even for life, will unquestionably abstain from the use of a remedy, which ought only to be employed in cases of evident necessity.

Blennorrhagia accompanied by ulcers on the prepuce and glans penis; by phymosis, paraphymosis, gangrene of the penis, swelling of the testicles, partial or total suppression of urine, inflammation of the prostate, or by an affection of the other glands of the urethra, by buboes, ophthalmia, &c. require particular treatment which I shall describe in the following chapters.

The truly syphilitic symptoms, or the herpetic eruption of the body succeeding blennorrhagia, especially after those cases accompanied by ulcers and hemorrhagies, or which have been improperly treated, require a general antisyphilitic or antiherpetic treatment.

CHAPTER II.

Of Blennorrhagia in Women.

BLENNORRHAGIA in women is rarely followed by as violent symptoms, and never by as distressing or as dangerous consequences as in men. In some instances, the symptoms are so light, that the running is regarded, at least in the beginning, as simple fluor albus, to which

moreover many women are subject, especially in the large cities of Europe.

Syphilitic blennorrhagia in women commonly termed virulent gonorrhœa, malignant gonorrhœa, or fluor albus malignus, has this characteristic,—that it is never seated in the cavity of the urethra, as advanced by some authors, and of late by B. Bell, in his treatise on gonorrhœa. I have never seen a woman in whom the disease was seated in the urethra. In fact it would be very strange, if the syphilitic virus communicated by coition, should be lodged in the cavity of the urethra. I have likewise observed in every instance, that the seat of the disease, is either on the clitoris round the orifice of the urethra, on the nymphæ in the cavity of the vagina, or else towards the inferior commissure of the labia at the rapha. What has probably induced some writers to entertain the erroneous opinion, that in women, the seat of blennorrhagia is in the urethra, is the occurrence of strangury or of ardor, and difficulty in making water, to which in this disease the women are equally subject with the men. But this affection of the urethra, as likewise the affection of the bladder, are in the former merely sympathetic, just as we often observe similar affections of the urinary passages in men affected with ulcers on the prepuce or glans penis; or else the urine issuing from the urethra touches in the vulva the parts irritated and inflamed by the virus, and thus occasions to the patient the sensation of burning and scalding as if in the urethra.

In general, blennorrhagia is accompanied in women by a degree of titillation, and itching round the orifice of the vagina, and particularly about the rapha; by uneasiness in setting, by tumefaction of the labia, of the

nymphæ, and of the clitoris; by heat and pain in voiding the urine, especially by scalding when the urine touches the affected parts; characteristic symptoms by which blennorrhagia in women is principally distinguished from fluor albus. In more aggravated cases the discharge of puriform matter which is of a greenish yellow colour, and very abundant, is accompanied by tense pains in the bladder, womb, groins, back, and lumbar regions.

It is, however, not unusual for the inflammation and pain to be very severe. Then the nymphæ, clitoris and labia become more swollen; and these parts, together with the rapha, the perinæum and sometimes the thighs become excoriated by the running. The consequence is excessive itching, burning heat during the evacuation of urine, and great uneasiness in walking or setting. In some cases, even the inflammatory symptoms run so high as to produce symptomatic fever, flatulence, vomitings, tension and pain in the region of the pubis, and even over the abdomen, increased on the slightest pressure. The inguinal glands become tumid and very painful, and then we often discover on examination that syphilitic ulcers exist in the vulva. These ulcers are sometimes so small, or situated so high up the vagina, that they cannot be detected unless the parts are very carefully examined.

In general, the violence of the symptoms depend much on the constitution of the patient, on the particular irritability of the parts affected, and perhaps also, on the greater or less acrimony of the matter which is the cause of the disease.

The symptoms and the consequences of syphilitic blennorrhagia in women differ greatly from what occur

in men. The reason is discoverable in the seat of the disease, which, as we have just remarked, is different in women from what it is in men, and in the structure of their genital organs. Hence in women the consequences of a suppression of the discharge, are neither so frequent nor so dangerous as in men. The suppression of urine, the swelling of the prostate, the strictures and other impediments in the urethra, symptoms so dangerous in men, never occur from this cause in women; and I do not recollect ever hearing of, or seeing in the female sex the dreadful ophthalmia which sometimes follows a suppressed blennorrhagia in men.

On the other hand, women affected with syphilitic blennorrhagia are more liable to excoriations, and buboes; and in this state they are more subject to a general infection, on account of the extent of surface exposed to contact with the virus.

As regards the treatment of syphilitic blennorrhagia in women;—the same indications are to be fulfilled as in men; with the difference that suitable injections and lotions may be employed, from the commencement of the disease, with greater safety on account of the difference of structure in the parts, and the seat of the disease.

We need not apprehend any of those distressing accidents so common in men; the application of the remedies to the diseased parts is ready, and the cure very easy.

They may use lime water, or pure water with a small quantity of the oxygenated muriate of mercury, or else according to circumstances, of the acetite of lead with the watery extract of opium, and a little camphor, to be applied in the form of injections or lotions

by means of a sponge, or a suitable syringe, seven or eight times a-day; after each application, the parts are to be rubbed with a little mercurial ointment. In many cases I have directed no other remedy than the latter to be well applied to the parts three or four times a-day. It will be proper to substitute for the common mercurial ointment, an ointment made with the muriate of mercury mixed with a little opium; it is less likely to soil the linen and betray the patient.

If the symptoms are more violent, soothing, mucilaginous or oily injections may be employed: but in some instances greater alleviation has been experienced from lime water, with a small quantity of alcohol, or a very weak solution of the sulphate of copper in distilled water, injected three or four times a day. Generally, in every case of blennorrhagia, in men as well as in women, when attended by great irritation, opium is the most efficacious remedy in mitigating and abridging the disease; but there must be great caution in the use of this remedy, especially when in the form of injections. I saw a young woman suffer excruciating pain and irritation, which produced fainting, after injecting a portion of a solution of opium in water, which remained at the bottom of the bottle. The same accident occurred to a young man who had employed the remnant of a similar solution of opium as a glyster. It appeared that what remained at the bottom of the bottles, was more highly impregnated with opium, or contained principally the resinous part of this drug.

When the matter is so acrimonious, that it threatens or actually produces excoriations of the neighbouring parts, principally about the rapha and on the thighs, the parts must be defended by the application of the com-

mon cerate, or what is perhaps to be preferred, the careful and early inunction, at least twice a-day, of the rapha and inside of the thighs, with an ointment composed of one part of tallow, and two parts of olive oil melted together at a low temperature.

In every instance, the practitioner ought to be on his guard, not to pronounce that a woman is cured of syphilitic blennorrhagia, without having previously administered mercury towards the close of the disease, for about a fortnight, with the view of destroying the virus which may have been absorbed into the circulating mass, during the continuance of the disease.

Before I close this chapter, I must remark that women are very subject to blennorrhagia, or a running attended with heat, pain, and tension of the uterus and vagina; particularly during and after menstruation. These runnings partake frequently of the herpetic character, sometimes of the leprous, at other times of the gouty; they are often infectious, and communicated by coition. The nature of such blennorrhagia may sometimes be discovered by the preceding morbid affection of the stomach, liver or skin, &c.*

* Every day's experience furnishes instances of women apparently sound, and free from all disease of the genitals, and not having a constitutional pox, who, nevertheless, communicate at particular times blennorrhagia and ulcers to the men connected with them. The same occurs in men. A friend of mine living in Paris, having red hair, and of a robust and sanguine temperament, in all respects healthy, except that he has been affected many years with an itching ring worm at the verge of the anus, has given the clap to several healthy women, without his having the slightest symptom. This confirms my former remark, that we cannot be too cautious when called upon to decide on a particular case, whether it be syphilitic or not.

This treatment requires the exhibition of internal and external remedies, adapted to the nature of the specific virus or acrimony, from which they originate.

I have likewise observed, that women affected with scirrhus of the uterus, are sometimes affected with an infectious discharge, producing blennorrhagia and ulcers, not syphilitic, in the genital organs of the men who cohabit with them.

The other topical discharges in women belong to the class of blennorrhœa, requiring the treatment indicated in the following chapter.

CHAPTER III.

Of Blennorrhœa, or Gonorrhœa benigna.

BY the term blennorrhœa, which I have substituted for that usually received, of habitual or mild gonorrhœa, I understand a preternatural discharge of puriform matter, or of a clear limpid mucus from the urethra in men, and from the orifice of the vagina in women, without any inflammatory symptom, that is without pain or heat in making water.

This running is distinguished, as noticed in the foregoing chapter, by the name of blennorrhœa, (mucifluxus passivus, that is a running without phlogistic symptoms,) from blennorrhagia mucifluxus activus, or a running accompanied by phlogistic symptoms, as

also from a real discharge of semen, or gonorrhœa strictly so called.

Blennorrhœa has been described by the later writers, under the vague and improper denomination of gonorrhœa benigna, gonorrhœa non virulenta, gonorrhœa inveterata, leucorrhœa sive fluor albus, fluor albus benignus. That which follows syphilitic blennorrhagia, the English writers have generally designated by the name of *gleet*.

After Blennorrhagia has continued some time, the inflammatory symptoms, as the heat and pain attendant on the erections, and the ardor urinæ gradually subside, and at length disappear; occasionally the running ceases at the same time, at the end of three, four, six or eight weeks. Such at least is the simple and more desirable termination of the disease. But it more frequently happens, especially when the use of mucilaginous remedies, and too strict a diet have been too long continued, that the inflammatory symptoms subside or disappear gradually, leaving a running of puriform matter commonly less abundant, thicker and whiter. This matter ropes between the fingers, does not so deeply stain the linen, and the stains are easily removed by friction. At other times the matter consists of clear limpid mucus. This running left to nature, often continues obstinate for months, and even years, without any other unpleasant symptoms; it is only in some cases that it is so considerable, as sensibly to weaken the constitution, and particularly the power of procreation.

In other cases, the running after having disappeared for some days, weeks, or months, is renewed either after coition, or violent exercise, or a debauch. The same occurs very often if the patient, on observing

that the running has disappeared, is less attentive, or neglects to employ the injections used for the cure of the disease. In these cases the blennorrhœa frequently returns, the running is very copious and at length becomes very obstinate.

Finally, if after blennorrhagia, there remains an ulcer in some part of the urethra, or an erosion of the orifices of the prostate gland or the vesiculæ seminales, the running becomes ichorous, or mixed with genuine pus; and in such cases, the disease is a true pyuria, which is always accompanied with dysuria. In other cases the sphincters of the orifices of the prostate gland, are merely relaxed, and the running is clear, muciform, constant and copious, having a peculiar nauseous smell. Sometimes this discharge of fluid occurs only or principally, when the patient goes to stool, the hardened fæces, in their passage through the rectum, pressing more forcibly against the prostate. If the sphincters of the orifices of the vesiculæ seminales are affected, the discharge is mixed with semen, constituting gonorrhœa strictly so called. In all these cases, the general health is more or less impaired, and the patient evidently exhibits the symptoms of general debility undermining his constitution, and proving in the end fatal.

Blennorrhœa has precisely the same seat with the previous blennorrhagia; that is, generally in the fossa navicularis near the frænum; at other times, in different parts of the urethra noticed in the first chapter.

The proximate cause of blennorrhœa, is a relaxation of the sphincters of the excretory orifices of the mucous glands, or of the vessels of the mucous membrane of the genital organs, so that they appear to have lost the power of contracting which they possess in health. The

cause is sometimes an erosion, or ulceration of these parts, always accompanied with the secretion of pus and of mucus, in larger quantity than is natural.

The occasional or exciting causes of blennorrhœa, are: 1. A previous blennorrhagia, (see the different kinds of blennorrhagia in the first chapter) principally if it has been neglected, or treated by improper means, and especially if it has been accompanied by symptoms of violent inflammation, hemorrhage, ulceration, &c. 2. A want of cleanliness in the parts, particularly in warm climates. 3. Masturbation. 4. Too frequent coition in persons of a weak, delicate, and irritable frame. 5. Scirrhus or fungous excrescence of the prostate gland. 6. An extraordinary irritability or some other disease in the bladder. 7. The callous edges of an ulcer, or bands passing from one ulcer to another in the urethra, concealing the ulcers. 8. Sometimes a mere callosity or contraction in the canal of the urethra. 9. Hemorrhoidal tumours, discharging mucus through the vessels of the genital organs, in either sex. 10. In women a sedentary life, the indulgence in luxurious living, the use of vapour, or foot stoves.

From what I have stated, blennorrhœa is naturally divided into two principal kinds: the first, blennorrhœa atonica; the second, blennorrhœa ulcerosa, which differ according to the nature, cause, and seat of the disease.

The symptoms more particularly indicating the existence of an ulcer in the urethra are, 1st, The matter being tinged with streaks of blood, or the discharge of blood during blennorrhagia, but especially after the violence of the inflammation has subsided. 2d, The discharge of pus, or ichor mixed with more or less mucus. 3d, A fixed pain in some part of the urethra, ag-

gravated by pressure, and by the introduction of the sound. 4th, An acute pain in a particular spot in the urethra, especially on voiding the last drops of urine, and during the emission of semen. Our judgment as to the existence of ulcer will be confirmed, if the preceding symptoms of inflammation have been violent; if the patient has been careless, or injudiciously treated; or, as I have sometimes observed, if the urethra has been wounded by the unskilful application of the syringe or sound during the inflammatory period.

It is essential that the physician should distinguish the blennorrhœa principally referred to in this chapter, 1st. From blennorrhagia, or a running accompanied with inflammatory symptoms, more or less violent. 2d. From gonorrhœa, strictly so called, or a morbid discharge of semen during the day or night. 3d, From the discharge excited in women from debility or peculiar irritability of the uterine system, occasioned by immoderate indulgence in venereal pleasures, or by frequent masturbation. 4th, From the serous discharge preceding or succeeding the catamenia. 5th, From the serous or mucous discharge to which some pregnant women are subject. 6th, From the discharge termed by authors fluor albus (leucorrhœa, menorrhagia alba), which originates from a general indisposition of the system, produced by a sedentary or luxurious mode of living. This disease often partakes of the character of gout. 7th, From the discharge produced by any vice or acrimony, as herpes, or scurvy, eliminated from the mass of blood, and evacuated by the orifices of the uterine vessels, frequently free from inflammatory symptoms, and rendered habitual; though in some instances the matter is so acrid as to produce excoriations of the genitals and

thighs. 8th, From the mucous discharge produced by the hemorrhoidal vessels communicating with the bladder or the genital organs. 9th, From the acrid or ichorous discharge proceeding from a phagidenic ulcer, or from a cancer of the uterus or vagina. 10th, From the discharge which accompanies condylomatous excrescencies, or polypi of the vagina.

Most of these runnings are mere symptomatic affections.

From what has been stated respecting the nature, cause and seat of blennorrhœa, it is obvious that according to the seat, cause and duration of the disease, the cure will be more or less difficult.

Blennorrhœa following simple blennorrhagia, is likewise a mere local disease, apparently very similar to the thick puriform discharge of mucus occurring after the inflammatory symptoms of coryza and catarrh have disappeared. But when the running remains after a violent or ill-treated syphilitic blennorrhagia, accompanied by excoriations or ulcerations of the urethra, the virus is commonly absorbed, and consequently the system is more or less infected.

Blennorrhœa, or an habitual running seated in the fossa navicularis, or in the lacunæ of Morgagni near to the orifice of the urethra, is more easily cured. When seated higher up the urethra, in Cowper's glands or in the prostate, the disease is more difficult of cure. In general, the longer blennorrhœa has continued, the more it resists the action of medicine. When originating from ulceration of the urethra, if dependent on an erosion of the excretory ducts of the vesiculæ seminales or of the prostate, or on an ulcer of the neck of the bladder, or of the bladder itself, the cure is the more diffi-

cult. In general, the higher up the urethra that blennorrhœa is seated, the more likely it is to be followed by a contraction of this canal, by dysury, by suppression of urine, and the more obstinate and dangerous it is likely to prove.

Method of Cure.

Wherever we are consulted in blennorrhœa, our first care should be to inquire, 1st. Whether the disease originates from a previous blennorrhagia. 2d, What part of the urethra or vulva is the seat of the disease. 3d, Whether it is a mere relaxation of the vessels on the secreting surface of the urethra or vagina, &c. 4th, Whether it is accompanied by excoriation or ulceration. 5th, Whether it is accompanied by any obstruction in the canal of the urethra, or by a swelling or other disease of the prostate, or of Cowper's glands, &c. 6th, Whether the disease is merely local, or whether it is accompanied by symptoms of syphilis diffused through the system.

When the disease is purely local it may be cured either by the topical application of astringents, or by internal, tonic and balsamic remedies; or finally, by the combination of these two methods. The best topical application is a saturated solution of the oxide of copper in ammonia; of which a few drops, diluted with one ounce of water, are to be injected six or seven times a-day, or rather whenever the patient has voided his urine.

In many cases I have used with success the muriate of mercury, obtained by precipitation, or the sulphate

of zinc dissolved in water mixed with the aqua camphorata; and injected five or six times a-day. Solutions of the oxygenated muriate of mercury, of the sulphate of copper, of the acetite of lead or alum, in water, have been recommended for this purpose. (see ph: syph:) Each of these remedies, alone or in combination with others, may be serviceable in some cases. In many cases, astringents, as a decoction of kino, of oak bark, of tormentella root, with a small portion of alum, used as injections, are very useful.

Of the internal remedies recommended for blennorrhœa I shall treat hereafter. I shall only observe for the present, that the decoction of guaiacum wood, or of the root of sarsaparilla, for some time administered internally, has occasionally and radically cured blennorrhœa: the use of the decoctions may, at the same time, contribute effectually to destroy the dregs of the virus absorbed where the blennorrhagia existed.

If the disease is accompanied by a general infection, as happens, when after a syphilitic blennorrhagia there is ulceration of the urethra or the vagina, besides the topical remedies, those suited to the treatment of the pox must be employed. In such, it is in vain to attempt to cure the running without having previously purified the general mass; and even if it should cease it would soon return, or the symptoms of the pox would oblige us to have recourse to mercury. After having administered mercury, or during its use, a solution of the oxygenated muriate of mercury and of the oxide of lead in vinegar, sufficiently diluted with water, and injected twice or thrice a-day, may be advantageously employed. (See ph: syph:)

Precautions to be observed in the use of Injections.

On the subject of injections in general, both for blennorrhagia and blennorrhœa, I shall make two important observations, the neglect of which may sometimes occasion a failure in the treatment, though the best remedies be employed. The syringe to be used for this purpose ought to have a short conical pipe, of such size that the end only should enter the orifice of the urethra. From the long slender pipes often used, two considerable inconveniences result. The first is, that with a small pipe, especially if not very smooth, the patient readily wounds the internal surface of the urethra, and is thus exposed to ulceration of the part, and consequently to an absorption of the virus. The second is, that the injected fluid, instead of passing into the cavity of the urethra, is discharged between the sides of the instrument and the orifice of the canal. The body of the syringe ought to be a perfect cylinder, and the piston should fit exactly; for if the piston does not exactly fill the body of the syringe, though the end should perfectly close the orifice of the urethra, yet the fluid would return through the syringe, instead of passing into the urethra; and thus the patient may imagine that he has injected the fluid properly, though not a drop or only a small quantity has entered the urethra.

But though the syringe be properly made, and though the patients may have received very particular instructions, they often perform the operation so unskillfully, that the injection produces no good effect. Having procured a good syringe, the pipe must be accurately

applied to the orifice of the urethra, so that by its conical form it may prevent the return of the fluid between it and the sides of the orifice of the urethra. If the disease is confined to the usual seat of blennorrhagia, in other words to the fossa navicularis just above the frænum, the patient must with one hand carefully compress the urethra at its first curvature where the scrotum begins, while he holds and manages the syringe with the fingers of the other hand. He is then to push the piston gently into the body of the syringe, (which though exactly fitted ought to slide easily) till he feels the urethra slightly distended. He must retain the injected fluid for one or two minutes, and repeat the operation twice or thrice in succession. When the piston is pushed incautiously, or for too long a time, the distension and irritation of the urethra that result, occasion more injury than the benefit derived from the injection.

By attending to these precepts a double advantage will be obtained. The fluid will be properly applied to the affected parts, at the same time (if the injections are used in syphilitic blennorrhagia), the danger of carrying the virus higher up the urethra by the injection will be avoided. This precaution becomes unnecessary when the disease is situated higher up the urethra.

With respect to the fluid to be injected, in blennorrhagia it must be used tepid; but in blennorrhœa or habitual runnings, this is not necessary. In the first case, the injection being too cold or too warm, may prove injurious to the patient, either by suppressing the running or increasing the inflammation. It may be easily warmed by half filling a cup placed in warm water.

In injections, where part of the ingredients is subject to precipitation, the fluid must be well shaken previously to being injected. In every case before the injection is performed, the patient should void his urine.

Another important observation I wish to make is, that young people who have habitual runnings, finding themselves better after having used the injection for some time, become less attentive in performing this operation, and sometimes neglect it entirely for a whole or the greater part of a day. This omission is generally followed by unpleasant consequences. The running is very often renewed with double force; and I have seen instances, where the patient having omitted the injection for a single day, the running has increased to such a degree, that it might have been taken for a fresh infection. The relapse is then often more obstinate than the primary disease, and the patient is obliged to continue the injection for as many weeks as it would have required days, to effect the cure had no interruption occurred in the use of the remedy.

To prevent all danger of relapse, it is prudent, and I always direct my patients, to inject three or four, or even six times a-day, if circumstances require, while the running lasts; and even to continue the injections twice or thrice a-day regularly for ten days or a fortnight, after the running has entirely ceased.

For women, the pipe of the syringe ought to be of greater size and length. I have found an ivory or pewter pipe, an inch in diameter and three or four inches in length, fastened to a small gum elastic bottle, the best adapted for obtaining the beneficial effects of the injections.

Besides injections, bougies are of great use, and

even absolutely necessary in the blennorrhœa of men, where there is ulcer or stricture in the urethra. They may be employed alone or in conjunction with the injections. With respect to their use, I must observe, that for the first three or four days they must be retained not more than a quarter or half an hour each time, and thus insensibly accustom the parts to support them for a longer time; after which the patient may retain them in for many hours night and morning, and finally for the whole of the day or night; bearing in mind, that before the application of the bougies, as before injection, the patient must endeavour to empty the bladder, so as to afford time for the remedy to produce its effects on the part affected. If the application of the bougie causes, as I have sometimes observed, pain and tension of the spermatic cord or a swelling of the testicle, the use must be suspended for some days. I have seen too large a bougie produce this effect, which ceased on using a smaller one. In general, at first small bougies are to be preferred to large ones.

As regards the treatment of habitual running, complicated with stricture of the urethra, and attended with more or less difficulty in voiding the urine, I refer the reader to the ninth and tenth chapter of this work.

If the cure of blennorrhœa is not effected by the use of injections or bougies, it is sometimes right to inject some fluid capable of exciting irritation and inflammation in the urethra, especially in the part affected. This method has often succeeded when the most powerful astringents have failed. For this purpose we may employ the injections ad blennorrhœam ph: syphil: No. 1, 2, 3.

It is probably on this principle that Doctor Cullen has observed, that an obstinate blennorrhœa has been cured by violent and long continued exercise on horse-back, as in a journey from Edinburgh to London; that is, by exciting inflammation in the affected parts. There are instances of similar runnings being cured by coition; but this is a remedy no honest practitioner would recommend, because such runnings are sometimes infectious, and the patient might communicate the infection to a sound person, at the same time that he might aggravate, instead of alleviating his own disease.

Besides the injections already mentioned, many other means may be advantageously employed in the obstinate cases of blennorrhœa; such as injections composed of powerful styptics, even of spirits of turpentine. A friend of mine has observed, that in some cases a blister applied to the penis or to the perinæum, has proved very beneficial. An obstinate running has been known to disappear on injecting the tincture of *Psychotria emetica*. Mr. Birch, a surgeon in London, has observed some cases where a cure has been obtained by a slight shock of electricity passed along the urethra. I notice all these means, because we are often at a loss for a suitable remedy in these obstinate affections.

The cold bath has likewise been recommended in obstinate blennorrhœa, and I have seen good effects derived from it; but in two or three instances I have known the running to be increased by it: other practitioners have observed the same effects. Sea-bathing is often very beneficial, as likewise the topical application of cold water, either pure or mixed with vinegar or brandy, with which the patient is to wash his privates three or four times a-day.

In cases of obstinate blennorrhœa it is generally proper, and very often absolutely necessary, to change the injections; for an injection of less strength has been observed sometimes to produce good effects, when a stronger has been employed without success, and vice versa. In many cases it is likewise advantageous to combine internal remedies with the external means.

Having fully treated of the external remedies, we shall proceed to consider those which may be employed internally, either alone or in combination, according to the exigency of the case, with the local applications mentioned in the preceding pages.

The most efficacious internal remedies are,

1st. *The preparations of mercury.* They are always required when the disease is accompanied by an ulcer of the urethra, especially if inveterate, or where there exist marks of a general infection. In such cases, pills composed of the oxide of mercury with turpentine are often well adapted. I have lately seen a case of blennorrhœa which resisted the other means cured by a mercurial course.

2d. The balsams and resins.* Of these articles, the liquid resin termed balsam copaiva is most generally employed; but I have found a kind in the shops which produces violent cholic;—in general this substance disorders the stomach. To prevent this effect, the best mode of administering is to direct the patient to take thirty or forty drops, in a little cold water, twice a-day,

* We are not well acquainted with the *modus operandi* of the balsams or liquid resins; it is however a fact which I have uniformly observed, that these remedies administered before the ardor urinæ and painful erections have disappeared though greatly diminished, are apt to produce a swelling of the testicles.

morning and evening; or fifty or eighty drops at noon, and immediately to swallow a small tumbler of water, with fifteen or twenty drops of the elixir vitriol of Mynsuht, so as to render the first remedy less offensive to the stomach. Half a dram of turpentine, or of the balsam of Tolu, or of Canada balsam, answers the same purpose. I have the case of a young man who, rendered impatient by the continuance of a very obstinate running, swallowed at a dose, a large quantity (two or three ounces) of the balsam of copaiva, and was cured.

Sometimes the balsams combined with the tincture of guaiacum or with the gum resin, brought from Africa, called kino, are used with happy effects.

3d. Tonics. Among these the gum resin just mentioned deserves the first place, the bark of the cinchona officinalis, in powder, or infused in red wine, or what is sometimes still better, infused in lime water. The root of tormentilla, in powder, or in form of extract, or in pills combined according to circumstances with the preparations of iron or the balsams, are very efficacious.

Alum whey sometimes produces very good effects. The tincture of cantharides, in doses of twenty or thirty drops given in water, has effected a cure in cases in which other remedies had failed; but this remedy must be administered with caution, as it may produce considerable injury, especially in delicate and irritable constitutions.

Instances however occur where all our efforts for the cure of an habitual running are unavailing; and we sometimes observe that nature alone accomplishes the cure, after we have ineffectually exhausted all the resources of our art. This happens in habitual runnings, depending on extraordinary causes, of which examples

are found in anatomical dissection; as when two ulcers in the urethra, situated nearly opposite to each other, unite partially, forming bands across the urethra, with ulceration underneath. Where there is reason to suspect such a cause, an operation will alone afford relief. If the bands are not very firm, they may be broken by introducing a catheter or sound. I leave it to the judgment of my readers to decide whether the very unpleasant and obstinate runnings which I am going to describe, belong to this class.

Some years ago I was consulted by a gentleman for a blennorrhœa, with which he had been affected for near ten years, and for which he had consulted physicians and surgeons in different countries. Sometimes the running stopt for some days, but it soon returned, especially after riding on horseback, and after coition. On these occasions the patient always experienced some uneasiness, and a slight running on the next day, which would subside and reappear on the repetition of the cause. He was the more distressed at this inconvenience as he was on the eve of marriage. On examining the patient, I discovered the seat of the disease high up the urethra, towards the perinæum. I directed the use of every remedy, both internal and external, which I could think of, but I could not effect a radical cure. I considered the disease as a callous ulcer, and upon this supposition I directed him to use bougies for more than two months, without his obtaining the smallest relief. Being obliged to travel, I left him very little relieved by all I had done; and his business calling him to Paris, I advised him to consult such professional characters as he thought might afford him relief. The following is the result which he communicated to me.

After my arrival in Paris, he writes, I consulted agreeably to your advice, the most celebrated men of the profession. The difference of their opinion respecting the cause, nature, and treatment of the disease, tended to render me more uneasy than before. Some advised a fresh mercurial course, others prescribed a variety of remedies internal and external. I shewed them the different prescriptions you had successively given. They expressed surprise that none of these remedies had succeeded. Nevertheless, they directed some new injections and some internal remedies, more to satisfy me for the fee, than in the expectation of rendering me any essential service. I was in fact for three or four months precisely in the same state as on my arrival in Paris. But surprising as it may appear to you, the last man recommended to me appeared the most ignorant of any I consulted. Nevertheless I submitted to his introducing the catheter into the urethra, in order to ascertain the precise seat of the disease. The catheter passed as formerly with ease till it reached the affected spot, when the same obstacle presented which had always been experienced, of which I had warned him; notwithstanding which he forcibly pushed the instrument; I told him that it occasioned excruciating pain; still he persevered and passed the catheter; instantly blood flowed from the urethra. The surgeon seemed alarmed, made a thousand apologies, withdrew the instrument, pocketed the fee, and left me extremely dissatisfied at having employed him. I expected to be much worse the next day, and to suffer much from his want of skill; but it was just the reverse. I have been relieved of the complaint for two months; I can ride on horseback and experience no inconvenience after the

act of coition, and consequently I consider myself radically cured. The gratitude I feel for the trouble you took on my account has induced me to offer you this history, which may be of some use to you, and which you can explain much better than I or those to whom I have made the communication.

Sometimes there remains a kind of chordee or curve in the penis, after all symptoms of blennorrhœa have disappeared. Frictions with mercurial ointment, or with camphor dissolved in olive oil, the volatile liniment, spirituous lotions, or electricity applied to the penis are the remedies adapted to such cases. Some authors have likewise recommended the internal use of the cinchona.

In every obstinate case of blennorrhœa seated high up the urethra, the state of the prostate must be carefully examined, for the disease of this gland is a frequent source of blennorrhœa. When the prostate is swelled and indurated, I have known cases where after a course of mercury, the application of cups to the perinæum, and the use of the extract of the *conium maculatum*, in large doses, have succeeded when other remedies had failed.

The blennorrhœa of the prostate is a morbid discharge of the mucus of this gland, sometimes mixed with the liquor of the *vesiculæ seminales*, occurring in the day and without venereal desire. This disease is soon followed by weakness and general debility, attended by great emaciation, and gradually terminating in death, if, as too often happens, the patient neglects to take proper advice, or suitable means are not employed in time.

The treatment often requires the skill of the ablest physician. The most efficacious remedies are the cold

bath, injections with the oxydes or metallic salts, fomentations with hemlock, blisters to the perinæum, a flannel waistcoat in damp or cold weather, and internally tonic medicines with a generous diet. To allay the irritation the best remedy is the watery extract of opium, or the inspissated juice of the *hyosciamus niger*. (See Chapter X.)

Genuine gonorrhœa is an unnatural discharge or emission of semen, frequent, debilitating and without pleasurable sensations, (*liquoris seminalis ejectio frequens, libidinosa involuntaria, debilitans*. Cullen.) Under this head are generally ranked diurnal and nocturnal pollutions, accompanied by pleasurable sensations. (See Tissot's Treatise on Onanism.)

There is another species of this disease, to wit: an unnatural discharge of the seminal liquor in the day time, frequent, debilitating and without erections or venereal desire. Dr. Wickman of Hanover is the only author who has fully treated this subject, in a little work, *de Pollutione diurna*, 1782.

These habitual discharges proceed, either from debility, relaxation or sometimes an extreme irritability of the testicles, the vasa deferentia, the vesiculæ seminales and their excretory ducts, and require a very cautious and skilful treatment, otherwise the patient becomes the victim of that species of consumption described by Hippocrates under the name of *tabes dorsalis*. As the treatment of this disease enters not into the plan of this work, I shall only observe, that for the cure the patient must be strengthened, not suddenly but gradually, by external and internal means, principally taking care to correct the irritability of the parts. He must gradually relinquish his dangerous habits. I have seen cases when it was necessary to bind the hands of the patients during

the night, because they inadvertently touched or excited the parts during sleep. The young practitioner ought to keep in view, that in these cases especially, the sudden transition from one habit or mode of living to another, is often opposed to the end intended; and that in conformity to this observation the prudence of the physician sometimes produces a cure when the use of the best remedies, and all the resources of the art have failed.

I have seen, though more rarely, a similar disease in the other sex. I have at present under my care a woman aged 28 years, who since she miscarried about eighteen months ago has been subject to very frequent involuntary nocturnal pollutions, occasioned by libidinous dreams, and accompanied by all the symptoms described by Hippocrates as the disease of men; her lungs begin to be affected by the disease. Since this was written, I have happily effected the cure.

If I have leisure I propose to write a short treatise on the different kinds of genuine gonorrhœa, as also on the fluor albus in woman.

CHAPTER IV.

Of the Affection of the Spermatic Cord, and of the Epididymus; of Swelling, and other Diseases of the Testicles.

WHEN syphilitic blennorrhagia has been treated either by improper remedies, or the patient labouring under it uses violent exercise, or especially if he catches cold in the part affected, there frequently appear a swelling and obtuse pain in the groins, extending to the scrotum, the testicle, or as we shall have occasion to observe, that part of the testicle termed epididymus becomes swollen and hard, and there is swelling, redness, and thickening of the scrotum. This disease is commonly called, though very improperly, a venereal swelling of the testicle and sometimes hernia humoralis.

It is very remarkable that this disease rarely appears in the beginning of blennorrhagia, or while the inflammatory symptoms are at the height, but more generally towards the decline and often at the close of the disease, when the symptoms of inflammation appear greatly diminished.

This swelling alway begins with an obtuse pain and tension in one or both groins, extending along the spermatic cord to the scrotum, and with an enlargement of the epididymus and the cord itself, which is evidently hard and painful to the touch; the scrotum on this side

appears red and swelled. If the disease is left to itself the testicle will be affected with all the symptoms of local inflammation; it becomes hard and painful, and the swelling acquires great size. Sometimes this swelling is accompanied by general irritation, violent fever, with a pulse frequent and hard in strong and plethoric constitutions, or feeble and very quick in delicate and irritable constitutions.

In some instances the patient experiences pain in the loins, nausea and vomiting. Generally the running is greatly diminished, or entirely stopt before these symptoms are manifest, but sometimes this does not occur to a sensible degree for one or two days after the swelling has appeared. I have never seen both testicles affected at the same time. Sometimes when the swelling subsides on one side, the other testicle becomes affected. The same thing happens sometimes after the removal of an ischury proceeding from the affection of the neck of the bladder, the consequence of a suppressed blennorrhagia.

This disease or irritation of the spermatic cord and of the epididymis, &c., is generally produced when the patient attacked with syphilitic blennorrhagia has taken violent, or sometimes even moderate exercise, on foot, on horseback or in a carriage, or when he has caught cold in the part, either by imprudently washing it with cold water, or by exposure to a current of cold air when making water in the street. Very often it is occasioned by acrid, irritating and astringent injections, and especially by repeated purges or by the internal use of balsams and resins. Many practitioners of my acquaintance think they have observed that nocturnal pollutions, and whatever leads to emission, tend particularly to

produce the disease. Hence the sexual intercourse during blennorrhagia frequently excites the disease. According to my observations the testicle itself is never swelled in the beginning, though in the sequel it may be affected.

I am not here speaking of the swelling or inflammation of the testicles produced by any other cause, internal or external, as for instance a bruise, or metastasis from the parotids, &c., capable of exciting local inflammation as ancient authors have noticed.

For a length of time it was generally believed that the pain and swelling were produced by the absorption of the syphilitic virus from the canal of the urethra, and its deposition in the the testicle itself; but this absorption and translation are purely hypothetical, and not founded on fact or anatomical observations.

Some authors likewise mention a swelling of the testicles, which sometimes occurs after the healing or drying up of syphilitic ulcers of the prepuce or glans. I do not remember to have seen any case of the kind, hence I shall say no more on the subject, but I have seen another worthy of being recorded.

The patient had been several years before attacked with swelling of the testicle. This disease having been improperly treated gave rise, on the swelling subsiding, to a fistula in ano. The operation for fistula was performed, but when he was on the eve of being cured the swelling of the testicle returned. I succeeded in removing the swelling, for which I was consulted, by exciting a discharge from the urethra, and the cure was completed by internal remedies. I must add that I have twice or thrice in the course of my practice seen a swelling of the spermatic cord and of the epididymis,

occur as the consequence of the application of too large a bougie, employed for a stricture in the urethra.

It appears to me that the proximate cause of the swelling of the spermatic vessels is an irritation or inflammation of the orifices of the vasa deferentia and vesiculæ seminales, and I believe that it is generally seated in the urethra at the veru montanum, or caput gallinaginis. There are however cases, as stated above, where the inflammation is originally seated in the testicle itself.

Some modern writers ascribe the swelling of the testicles to the sympathy existing between them and the urethra; others to the extension of the inflammation along the urethra and vasa deferentia to the testicles; others again suppose that the disease is always the effect of a redundancy and accumulation of semen in the testicles. But if it were merely the result of sympathy why does the swelling occur so seldom, as long as the discharge is regularly continued from the uerthra, though the symptoms of inflammation and irritation are violent. If the inflammations extending along the urethra is the true cause of this swelling, every man in whom the inflammation is violent, and extends along the urethra to the prostate or to the neck of the bladder, ought likewise to be affected always, or at least generally, with swelling of the testicle; but this is not the case. Lastly, if this disease depended on the accumulation of semen, when such accumulation did not take place, the swelling ought to abate or entirely disappear, which we do not observe. On the contrary, we very often see young men affected with this disease, have involuntary nocturnal pollutions without being either cured or relieved; but though this were the case, I would still ask whence

this accumulation of semen and these violent effects, while we never observe them in young men, who are continent, robust and in good health. All these theories appear to me either absolutely false, or very unsatisfactory. The only constant and well authenticated fact is, that the disease may be produced by a particular and extraordinary degree of irritation excited in the urethra while affected with syphilitic blennorrhagia, by any cause, as acrid injections, the use of balsams, cathartics, &c.; by cold, coition, or any mechanical stimulus. Perhaps in some cases, the virus shifts its seat, and lodging on the excretory orifices of the vesiculæ seminales, directly irritates them; and this irritation communicated to the vasa deferentia and the epididymis, produces the disease. I do not assert that the secretion of semen being increased will not in the end contribute to the swelling. Indeed I think that to this stimulus may be referred the nocturnal pollutions commonly observed at the commencement and during the course of the disease; but these pollutions no ways contribute to diminish it; probably the emission is only from the sound side. The following fact has enabled me to elucidate the disease.

I was attacked, when twenty-five years of age, with syphilitic blennorrhagia, which acting on a delicate and irritable system, was accompanied by violent symptoms. I consulted at the time, one of the first physicians in Europe, who advised me to drink freely of mucilaginous fluids, and twice a week to take cathartic pills, whose principal ingredient was the muriate of mercury. In consequence of this treatment, after the second dose I was attacked with a swelled testicle. Having watched every symptom from the commencement of the disease,

I first perceived an uneasiness and a tension accompanied by an obtuse pain along the spermatic cord of the right side, which extended to the scrotum; these parts were a little swelled, and painful when handled. I was obliged to keep my bed. The next morning, on carefully examining the affected parts, I was greatly surprised to find the testicle in a natural state and free from pain; but that the epididymis was much swelled and hard, the spermatic cord swollen, with the sensation of an obtuse pain, as if the part had been stretched or squeezed. I communicated this observation to many physicians who visited me; they all thought that I was mistaken, but on examination they found the part in the condition I had stated. All considered it as a new and extraordinary fact. By the advice of my physician, I constantly applied warm emollient cataplasms to the scrotum for several days; but during their use, my disease instead of abating had greatly increased. The running had almost entirely disappeared from the first day; the testicle became very hard and swelled, and I felt a peculiar uneasiness in the part; the pain along the urethra was sensibly aggravated, especially on voiding my urine. I determined to remove the cataplasms, to apply a suspensory bandage to allay the painful tension, and with the view of bringing back the running, I exposed the genitals two or three times a-day to the vapour of warm water. These means had the desired effect; the second day after applying them, the running increased, and I was soon relieved; in a few days the disease of the testicle and spermatic cord was dispersed, and a few weeks after the blennorrhagia was radically cured.

It will be readily understood, that I was desirous of ascertaining whether this observation were accidental,

or connected with a general law hitherto unknown, and which had escaped the attention of practitioners. I was fully satisfied, and have ascertained by subsequent experience, that the fact is undeviating, and strictly conformable to the observation made on the first occasion. I am convinced, that the only parts originally affected in this disease, are the vasa deferentia and epididymis; that the testicle is never swelled in the beginning of the disease, that is for the first two or three days; and if in the sequel, it is the case, it is owing to the improper treatment or neglect of the patient. I have likewise observed, that the fever so frequently attendant on this complaint, is never a primary disease, but always secondary or symptomatic; the consequence of local irritation, whose character varies according to the constitution of the patient; and that in pursuing the treatment I shall presently point out, the physician may for the most part, if called in time, prevent the fever, and the other evil consequences of the disease.

I have connected with these facts two others, not less important, and equally general, to wit. 1. That the running, and even sometimes the other symptoms of inflammation in the urethra cease entirely, or are considerably diminished, before or during the two or three first days of the disease. 2. That this disease increases, and continues as long as the running is absent, or that some other part of the urethra is not affected, and that on the other hand, the symptoms subside the moment the suppressed blennorrhagia is renewed.

This disease, treated according to the method I shall point out, in general yields readily in a few days, but if neglected, or not properly treated, or in case of a relapse, it becomes not only more obstinate, but more-

over, by exciting a genuine inflammation of the testicles, it becomes sometimes very dangerous, from the fever, the suppuration, the induration, and even the mortification of the affected parts resulting from that inflammation.

I must remark, that after the most expeditious and fortunate cure, the epididymis remains hard for months and even years; but as far as I have observed, this accident is never followed by unhappy consequences. This induration generally disappears gradually of itself.

From these facts and observations on the seat, symptoms and nature of the disease, I was led to adopt a practice better adapted to its nature, and consequently more fortunate, and more perfect than the practice hitherto pursued.

Method of Cure.

The first intention of the physician in every case, as noticed in the chapter on blennorrhagia, should be to prevent the disease and its dreadful consequences; and when that is impossible, to alleviate and cure them in the most safe and expeditious manner.

If the reader attentively considers that the disease now before us only attacks men affected with blennorrhagia, and that whatever occasions a suppression of the running, tends to produce this swelling, he will readily perceive that to prevent this terrible disease, every thing that can increase the irritation and inflammation of the urethra, and stop the discharge of matter, must be carefully avoided; as cold, violent exercise, and particularly improper injections, and the use of purgatives, bal-

sams, &c. But the most effectual means I have found for preventing this disease, is the avoiding all tension of the spermatic cord, which may be successfully accomplished by the uninterrupted use of a suspensory bandage, from the beginning of every blennorrhagia. For which reason, I never fail to recommend it the moment I am consulted in blennorrhagia. By carefully observing these rules, this accident may be completely prevented; and none of my patients who have punctually conformed to them have ever been attacked by this distressing complaint.

But we often meet in practice with patients careless and inattentive; at other times we are called to persons, who, on account of these precautions not having been adopted, are already attacked with the disease. In this case, the first care of the physician should be to examine the part affected, to determine with precision whether the disease is still confined to the epididymis and vasa deferentia, or whether the testicle itself is affected, and then what progress it has made, and what symptoms it has produced in the diseased part, or in the general system.

In either case the following indications are to be fulfilled.

1. To diminish the pain and tension in the affected parts, which contribute greatly to maintain and favour the progress of the disease.

2. To allay, or entirely remove, as early as possible, the irritation seated in the urethra and the veru montanum.

3. To prevent the distressing consequences arising from the inflammation of the testicle, and the fever, and

4. To cure the latter consequences if they already exist.

To fulfil the first indication, we must direct the application of a suspensory bandage; or for the want of this, a handkerchief round the scrotum, with the view of suspending the testicle, or rather of gently supporting it in the bag. If the patient has a frequent, full and strong pulse, he must be bled immediately. The bleeding should be copious, especially if the body of the testicle is affected; having regard always to the constitution of the patient, and to other circumstances. If the fever is not violent, bleeding is not necessary, which is generally the case, when we are called at the beginning of the disease; for as I have already stated, the fever in this disease is never primary, but entirely symptomatic; or the consequence of irritation in these sensible parts. The drawing of blood is, moreover, useless and even injurious, if the pulse is quick and weak; for then it announces the atonic state of fever. In other instances, where the swelling and local inflammation are very great, with little or no fever, the application of leeches answers better than bleeding.

To allay the irritation, which is seated in the canal of the urethra, the internal and external use of sedatives, are the most efficacious of all the means which contribute at the same time, to restore the running that has been suppressed.

If there is no fever, or the moment the fever abates, I begin with giving a large dose of opium, as one or two grains; or according to circumstances, a glyster composed of two or three ounces of linseed oil, and barley water, with fifty or sixty drops of the liquid laudanum of Sydenham. I direct it to be repeated every ten or twelve hours, taking the precaution, when the patient has not had a regular stool, to premise a com-

mon glyster, in order to evacuate the fæces, which by their irritation in the rectum, might counteract the effects of the remedy. In some cases, principally when it is necessary to persist in the use of sedatives, I have found the extract of the *hyosciamus niger* preferable to opium. I have obtained such happy, and immediate effects from this mode of administering sedatives, that I recommend it without hesitation, as preferable to all others. I have seen many cases, where the swelling and pain have been removed, and the running restored by this method, in twenty-four or forty-eight hours; and when this effect was not so immediate, it uniformly relieved the patient, and prevented fever. I need not add, that the patient should keep in bed, and not remove the suspensory bandage; that he should make use of a light diet, and drink nothing but barley water with figs, or the almond emulsion, or the decoction of hemp-seed.

But having constantly observed in the most obstinate cases, that the symptoms of irritation, and the swelling never subside till the running is at least partially restored, and that the moment the blennorrhagia is renewed, the pain and swelling gradually disappears, I have directed my attention to bring it about. I have found nothing more successful, than exposing the genital organs, to the vapour of warm water, mixed with a little vinegar. For this purpose, the patient is seated in a perforated chair, over the steam for a quarter or half an hour, three times a-day, taking care to suspend the testicles by means of the truss. From thence he is to be carried to bed, and a dry truss to be applied, in order that the vasa deferentia may never be in a state of tension capable of exciting irritation, or at least of contri-

buting to it. To insure success during the intervals of using the steam, the patient should surround the penis with a poultice of bread and milk, with the addition of a little oil, to retain the moisture and heat. But I have found these poultices applied to the testicles, as recommended by several authors, of so little service that I no longer use them.

If the patient has not a regular stool, to prevent the accumulation of fæces, I order him a common glyster every day, or every other day, never omitting the opium, especially at night. By proceeding thus, we shall generally have the satisfaction to cure, in a few days, a disease, which by the ancient method of treatment required many weeks, and after all, sometimes ended in a suppuration or induration of the testicle.

The running thus renewed, is to be treated as a common syphilitic blennorrhagia, taking care to give no occasion to a new repulsion, which would easily produce a new swelling of the testicle.

After the cure of this complaint, there remains, as mentioned above, a hardness in the epididymis, which goes off slowly, and which may be perceived for some years. For want of sufficient experience, I cannot determine whether this induration prevents the secretion of semen from that testicle, and whether it impairs the powers of procreation. Many patients, whose attention I had requested to this object, have assured me that the affected testicle, long after the disease, appeared inert during coition; but in the end, it recovered its natural functions.

To fulfil the third indication, that is, to prevent the consequences of the inflammation of the testicle, we must remember the principle already established, that

this disease, excited by the syphilitic virus lodged in the urethra, is never originally an inflammation of the testicle; that the latter occurs only through bad treatment or the neglect of the patient, and that it is generally in the power of the physician to prevent this inflammation and its consequences by the method we have just pointed out.

If the inflammation of the testicle (*orchiocele phlegmonodes seu inflammatoria*) has unfortunately taken place before we are consulted, or if it is produced by other causes internal or external, nothing must be neglected to discuss it as soon as possible, and to prevent the consequences, as suppuration, mortification, chronic induration or scirrhus of the testicle. Fomentations and warm emollient poultices, so serviceable in local inflammation, and recommended by many authors for this disease, are not only useless but even injurious, by obviously favouring suppuration which we have so much reason to fear and to avoid. If this swelling of the testicle is accompanied by inflammatory fever, the patient must be bled as stated above; and if the pulse is not rendered softer and less frequent by the bleeding, the operation must be repeated in eight or ten hours time. In some cases, principally when the symptoms of inflammation are rather local than general, the application of eight or ten leeches to the perinæum and scrotum is to be preferred. When blood has been drawn by either of these modes it will be right to apply cold fomentations or poultices to the scrotum and perinæum, to be renewed as often as they become warm. For this purpose compresses may be dipped in cold water, either pure or mixed with the liquid acetite of lead, or according to circumstances, in a solution of the acetite or

muriate of ammonia in cold water; at the same time continuing the use of the truss as recommended under the second indication. I must not omit to state, that in London they have lately employed with success, with the intention of discussing a recent swelling of the testicle, snow, ice or ice water, renewing the application every hour or half hour, and that many persons have been cured by this method in three or four days.

The fourth indication of cure comprehends the consequences arising from this affection of the testicle. If suppuration or mortification follow the inflammation, the organ is destroyed, and its functions are for ever lost; here art availeth nothing. Fortunately, this consequence is of rare occurrence. It more frequently happens that the symptoms subsiding, leave a chronic induration of the testicle, requiring a peculiar treatment which we shall proceed to describe.

SECTION I. *Of Induration and other Diseases of the Testicles.*

This induration, commonly termed scirrhus of the testicle, occurs when the swelling of the epididymis has been neglected or injuriously treated. The same complaint sometimes occurs after an inflammation of the testicle, proceeding from some other cause internal or external, and then both are sometimes equally affected.

In such cases the epididymis is always very hard and enlarged, and the indurated testicle is sometimes enlarged, but more frequently it is diminished in size, and as it were reduced in substance. This complaint is sometimes attended with a sensation of painful pressure,

at other times, without any pain at all. According to the observations of the patients, the testicle in this state is inert during coition, and the person is incapable of procreation, if both testicles are affected.

This disease seldom remains long without degenerating. It then produces a dilatation and swelling of the spermatic vessels of the cord and testicle, (*orchiocele spermatica*), commonly, though improperly called *varicocele* or *circocoele*, (from the Greek *κιρσος*, *varix*, and *κηλη* tumor), a name which ought to be restricted to a real enlargement of the blood vessels of these parts; but even this varicose tumour, is better characterized by the name of *orchiocele varicosa*. At other times, it produces an irregular hard swelling of the testicle, epididymis or spermatic cord, generally termed *sarcocele* (from the Greek *σαρκος*, *caro*, and *κηλη*, tumour) which might be termed with greater precision, *orchiocele scirrhusa*. If the swelling is painful it threatens and often terminates in true cancer, (*orchiocele carcinomatosa*), which requires castration, (*orchiotomea*). To these are frequently joined a diseased enlargement of the lymphatic vessels of the spermatic cord, extending to the kidneys, and these organs become likewise affected, or the swelling finally degenerates into a cancer. Hence every means ought to be employed to excite the powers of nature, and to discuss and resolve the hardness as early as possible.

I shall proceed to a detail of the remedies which I have successfully employed, as well as those recommended by different authors, in swellings of the testicle.

If the patient has not employed the suspensory bandage, we must direct its immediate application. He

must remain quiet or abstain, if possible, from exercise, and observe an abstemious diet.

If the vapour of warm water with vinegar applied to the part affected twice or thrice a-day, with the precautions, and in the manner we have recommended, does not restore the running, and does not effect a resolution in eight or ten days, the patient must take an emetic.

Several writers have recommended ipecacuanha (*psychotria emetica*), others the sulphate of zinc, others the yellow oxide of mercury. Any of these remedies may be employed indifferently, provided that vomiting, with considerable nausea, be excited, without creating too great a disturbance in the bowels. On this account the patient ought to be directed to drink little or none in the intervals of vomiting. He may apply, with advantage, to the testicle, a cold fomentation made with a watery solution of the acetite of ammonia, to which has been added a small quantity of alcohol; or according to circumstances, a poultice, made with crumbs of bread and water, with a spoonful of the acetite of lead. These cold fomentations should be frequently repeated and continued for several days. If the swelling is not then changed, the vomit may be repeated. Sometimes repeated cathartics have been serviceable. The ammoniacal liniment, or mercurial ointment, rubbed on the perinæum or scrotum twice a-day, often produce good effects: mercurial fumigation applied to the genitals, to stimulate the vessels and restore their action, deserve a trial. In some instances, the internal use of mercury is required; a trial likewise may be made of the remedy recommended by Celsus, in inveterate indurations of the testicle, from whatever cause. It is a poultice made with the root of the *mamordica elaterium*, boiled in mead (*mulsum*) and then bruised.

The decoction of the bark and root of the *daphne mezereum*, given internally, and the application of a poultice made with the powdered root, have lately been greatly extolled; but their use requires great caution, on account of the acrimony of this article. Many to whom I have given this decoction, would not continue it, on account of the inconvenience they experienced. If it produces good effects, it is probably by exciting nausea and vomiting. According to the observations published by Acrel, a celebrated surgeon in Stockholm, a decoction of the root of the *ononis spinosa*, given internally, has succeeded in many cases, where other remedies had failed.

He boils half an ounce of this root, with a pint and a half of water to one pint, sweetens it with syrup of camomile, and gives a table-spoonful of it every three hours.

Other practitioners have likewise observed good effects from a decoction of the *ononis*, made with one ounce of this root boiled with a pint of water, and given every day; others have administered a drachm of the powdered root twice a-day.

Professor Plenck recommends the powdered root of the *atropa mandragora*, to be formed into a poultice, and applied warm. The internal and external use of the hemlock (*conium maculatum*) has been prescribed in similar cases.

Considerable benefit has been derived, as formerly remarked, from the application of the ammoniacal liniment, and in many instances from fomentations of the muriate of ammonia and vinegar, mixed with water.

Mr. Birch, surgeon in London, has assured me, that

in such cases, he has often applied electricity with success.

Van Swieten told me, that he had given for an indolent chronic induration of the testicles, lapides cancrorum (carbonate of lime), an ounce in a pint of good Austrian wine, or old hock, taking three or four table-spoonfuls every morning and evening, with good success. I have seen the patient, who informed me, that he had been cured by him of a hard swelled testicle, though from a venereal cause, by the same remedy; and that he had been perfectly well ever since. When the wine cannot be procured, we may substitute the acetite or citrate of lime, or, perhaps, with greater advantage, the muriate of lime, or the muriate of barytes.

All these remedies, however, sometimes fail; particularly when the induration has continued obstinate for several months or years, and when it originates from a syphilitic blennorrhagia injudiciously treated, neglected, or suppressed.

In several tumours or indurations of this kind, and in some affections of the bladder and urethra, and especially in the ophthalmia palpebrarum proceeding from an ill-treated or imperfectly cured blennorrhagia, after trying every remedy recommended, without effect, I have known the patients cured by being again affected with syphilitic blennorrhagia. Repeated observations at length induced me to try in similar and very obstinate cases, the inoculation of blennorrhagia. I saw this remedy employed for the first time, about twenty years ago, in one of the large military hospitals. Though many very specious objections may be urged against this practice, every practitioner, who has the welfare of his patients really at heart, and who has witnessed the unhappy con-

sequences which sometimes attend these indurations, will readily agree with me, that it is better to try a doubtful remedy, than to leave the patient exposed to cancer, or some other disease, which, in the end, may prove mortal, or require the extirpation of the testicle. I venture to propose this method with the greater confidence, as, in extensive experiments made in some of the military hospitals, and in the cases where it was employed in my private practice, the success was complete. For performing this artificial inoculation, the matter taken from a person affected with a syphilitic ulcer, or blennorrhagia, is to be applied to the urethra, by means of a short bougie, or any convenient instrument, which must remain in the urethra some time: in this way, an irritation, and, consequently, a new blennorrhagia, will be produced.* (See likewise the following chapter.)

There are inflammations and indurations of the testicles, and spermatic vessels, originating, as I have already observed, from other causes, internal or external, as contusions, metastasis from the parotids, &c., described by the ancients, particularly by Hippocrates and Celsus. But the treatment of these complaints, forms no part of the plan of this work. I shall only relate an extraordinary case, which came under my care, and deserves to be mentioned.

A young man of twenty years of age, afflicted with scrofulous swellings about his neck, was advised by a

* Of late, I have frequently used the bougie, without being imbued with the virus, which I allowed to remain, till it produced a sensible irritation in the urethra, and the success has been the same.

physician to make use of the decoctum lignorum. Following this advice for some weeks, he was affected with a cough, which, in a fortnight after, ended in an hæmoptysis. Though he now left off the decoction, and made use of several other medicines prescribed to him, the cough continued for many months, accompanied with spitting of blood, or mucus, streaked with blood occasionally. Being consulted, I gave it as my opinion, that his lungs were affected with scrofulous tubercles, for which I knew no remedy; and desired him to consult the first men of the profession in the place. Though the remedies ordered by them did not in the least alter his cough, he was, in other respects, tolerably well, ate with an appetite, and slept with ease. One day he came to me, and complained of a painful swelling in the groins, but more in one than the other. Upon examining, I found the spermatic cord very much enlarged. I asked him whether he had made free with the sex? He declared, upon his honour, he had never lain with a woman in his life, for fear of being poxed; but said, he had had the same complaint several times before, and felt it always, whenever he was in company with young women, who strongly excited desire; that it grew sometimes extremely painful, insomuch that he avoided such occasions as much as possible. Having been in such a situation the day before, the same pain came on, but had continued so much longer than usual, that it induced him to apply to me for assistance. I advised him to apply cold water to the parts, which cured him of his complaint in a few days. Thus much I thought to premise to what follows.

Some months after, he complained to me that one of his testicles had become very hard without any apparent

cause. Upon interrogating him about the use of women, he repeated the same thing he had done before; but confessed that he had frequently masturbated himself, without knowing that the practice could produce any disorder. I prescribed hemlock, and all the resolvents the materia medica affords, both internally and externally, but without any effect: the testicle grew painful, and daily larger; and at last burst, and a small quantity of purulent matter was discharged. On my return to town, after an absence of some months, he told me, that, during that time, a small discharge had continued; and that several fibres, like thread, came from the ulcer every day. Upon examination, I found the whole testicle reduced to a very small size, and the ulcer nearly closed up; and, in a few weeks, it was quite healed. His cough continued during this time; but he appeared not to be more emaciated, than when he first applied to me. Every three or four months, when the tickling of the cough seemed to increase, and he was afraid of a spitting of blood, he was bled by his own advice. The spermatic cords were quite natural. The same month of the following year, the other testicle became affected, just as the former had been. A surgeon of eminence, who had treated the patient with me the preceding year, was now called in, during my absence; and, though every thing was done for him, which, in my opinion, could have been done, when I returned back to town, the complaint still continued, and had now lasted for ten weeks. At the expiration of the seventh week, the testicle burst; and whole pieces of the spermatic vessels of the testicle, were every day discharged from the opening; and in three months the testicle was reduced, like the other, to the size of a small hazel-nut. There

was no swelling of the spermatic cords; and the patient told me, he had strictly followed my advice, and avoided, for these two years, his bad custom above-mentioned. The cough continued; but, by degrees, reduced him so low, that he died two years after.

The physician who attended him last, informed me, that, on opening the body, he found a vomica in one of the lungs, and many large hard tumours, or tubercles, in both; but he had not examined the testicles. From what cause the disease of the testicles arose, whether from a scrofulous complaint, or from masturbation, I do not pretend to say: but I relate the case only as a very particular and remarkable one, which shows, that there may sometimes happen a suppuration of the testicles, even with the greatest care, and most judicious treatment.

Of Cancer of the Testicles.

When the induration of the testicles is neglected, and it resists all our remedies, it sometimes becomes hard, and, in time, acquires the character of carcinoma. Immediate recourse must be had to extirpation; but before the operation is undertaken, we must carefully examine, whether the lymphatic vessels of the spermatic cord, are not at the same time affected. In this case, the excision proves an useless operation, and will only expose, by its fatal consequences, the reputation of the surgeon. On the examination of several bodies, which I made while in London, I found the kidney of the same side, to which those lymphatic vessels go, generally affected, and, consequently, the disease was incurable.

CHAPTER IV.

Of Blennorrhagic Ophthalmia and Cophosis, or of the Inflammation of the Eyes, and of the Deafness produced by a Suppression of Syphilitic Blennorrhagia.

THERE are three distinct species of syphilitic ophthalmia. The first and second, arising from blennorrhagia, belong to this chapter. The third, produced by the syphilitic virus, diffused through the system, will be noticed in a subsequent part of this work.

I shall begin by describing the first, which is the most acute, violent, and dangerous, of any ophthalmia I know of.

I have seen this terrible disease several times, but never among my own patients. All the practitioners with whom I have conversed, respecting this dreadful disease, and who have observed it several times in their practice, were of opinion, that this ophthalmia originated from a retropulsed virulent gonorrhœa, by metastasis.

To the best of my knowledge, the disease has never been observed in women. According to my observations, it has been confined to men affected at the time with syphilitic blennorrhagia. As I know of no author, who has written professedly on this species of ophthalmia, I shall transcribe from my journal what appears to me the most interesting and instructive.

In three cases which I have seen, this ophthalmia appeared in the winter in very cold climates, after the

patient, attacked with a recent blennorrhagia, or virulent gonorrhœa, as it is usually termed, had been exposed to severe cold, in the open air. In two of the cases, both eyes were affected at once, and suddenly. None of these patients had previously had the slightest complaint in their eyes. In the three cases, the running from the urethra was evidently diminished or suppressed from the commencement of the ophthalmia; and, at the same time, there was discharged from the eyes a puriform matter, of a greenish yellow colour, resembling that of blennorrhagia, with excruciating pain, which was rendered insupportable, on the least application of light. The same matter which ran out of the eyes, seemed, as far as I was able to observe, by forcing up the eyelid, to be extravasated in the whole anterior chamber of the eye, and, as it were, infiltrated between the lamellas of the transparent cornea. All remedies which were applied proved ineffectual, and perpetual blindness was the consequence.

The last patient was a young man, twenty-nine years of age, who served as a captain in the emperor's army. He was ordered on guard in the month of January, while he was afflicted with a recent violent clap. Unfortunately, the day was excessively cold, and he was, by duty, much exposed to the open air all day, and that evening: in the night, he found himself at once affected in both eyes, with the most excruciating pain, and intolerance of the smallest degree of light; to which, next day, followed a puriform discharge from both eyes. Upon inspection, the albuginea was every where highly inflamed, and very much swelled. Unfortunately, a very ignorant physician was called, who ordered, besides the common remedies, such as bleedings, purgatives, &c. a

fomentation of hemlock. On the third day, upon a closer examination, the cornea was found opake, and an hypopyon formed: no ulceration appeared. The hemlock was continued, and, as may be readily imagined, without effect. Ten or twelve days after, the inflammation and running abated; but the cornea remained opake, seemed to be very much thickened, and the patient remained perfectly blind. In this patient, I clearly saw the arteries of the transparent cornea coming from the albuginea, inflamed, and so filled with red blood, as if injected like an anatomical preparation, even till the fifth week of the disorder, when I visited him for the last time.

In none of these cases did the practitioners attempt the incision of the cornea, nor any means for restoring the running from the urethra. The only two remedies from which I should expect any effectual relief in such an ophthalmia, besides the general and topical evacuations by bleeding, purgatives, leeches and blisters, the discharge from which ought to be kept up, and not omitting the internal and external use of mercury, especially of the oxygenated muriate of mercury. The incision of the cornea for discharging the extravasated matter, should be performed in the beginning of the disease.

After the inflammatory symptoms are removed, there remains in that portion of the conjunctiva covering the cornea, an opacity termed pterygion, or pannus. Besides the opacity of this external lamina of the cornea, the cornea itself frequently becomes opake. In this case, there is no excrescence to be removed; but as Professor Richter of Gottingen, very judiciously remarks, all the efforts of the practitioner should be directed to restoring the transparency of the cornea. This disease, properly

termed Leucoma, arises from a stagnation or thickening of the humours, the removal of which should be attempted, not by internal but by topical means, as the muriate of mercury, borax and ammonia. These remedies will produce no effect if the disease is inveterate; and surgical operations can be of no service, if the cornea is opaque. If the conjunctiva, covering the cornea and forming its external lamella, is alone affected, after the foregoing remedies have failed, the excision must be attempted. The operation consists in a circular incision through the conjunctiva, near the edge of the cornea. This incision in the course of some days will be followed by an exfoliation of the conjunctiva. If the patient can distinguish the light previous to the operation, there may be greater hopes of success.

I shall now examine the second species of ophthalmia mentioned above. It is a chronic inflammation of the eyes, particularly of the eye-lids, accompanied very often with little ulcers of the sebaceous glands, and with an oozing of thick yellow matter, described by authors under the appellation of *Psorophthalmia*. In the course of my practice, I have seen many cases of this ophthalmia. In the beginning, not knowing their source, I was distressed at my employing the best remedies for ophthalmia, without success; instead of ascribing this want of success to the inefficacy of the remedies, as physicians and surgeons generally do, I attributed it to my ignorance respecting the true nature of the disease. I soon had an opportunity of learning that I was not deceived in this.

In London, a young man consulted me for an ophthalmia of this kind. After having tried the best remedies, internal and external, with which I was acquaint-

ed, without relief, he left me; and I heard no more of him for two months, when he one day asked my advice for a syphilitic blennorrhagia. He mentioned that he had consulted, during his absence, several practitioners on his ophthalmia; but their prescriptions had produced no better effects than mine; that having caught a blennorrhagia eight days ago, he found his eyes become easier the third day after the running appeared, and that the ophthalmia diminished daily, and at present it was perfectly cured. On enquiring whether he had never had a clap before, he told me had, sometime before he consulted me the first time for the complaint in his eyes; that he had suffered much and for a long time; but in the end the running disappeared, but he had not mentioned it, because he thought there could be no connection between the gonorrhœa and the disease in his eyes, which came on some weeks after.

This was a striking lesson, which I have never forgotten. Accordingly, when such cases of ophthalmia have occurred, I never failed to inquire whether the patient had been previously infected with blennorrhagia, or virulent gonorrhœa, as it is usually termed, and whether the blennorrhagia had been treated and cured properly. In all these cases, especially when the patients said they had tried many remedies, both internal and external, for ophthalmia, I have advised the inoculation of blennorrhagia, as the safest and most speedy way of curing the ophthalmia, and have had the satisfaction of seeing them generally cured without any external application. I have met with a similar case recorded in a little work on ophthalmia by Dr. Lunge, which deserves to be introduced here. A butcher was admitted into the hospital at Buda, the capital of Hungary, with a violent

inflammation of both eyes. Professor Plenck, on examining the patient, found that the ophthalmia proceeded from a recent blennorrhagia, which had been injudiciously treated and suppressed: he proposed the inoculation of blennorrhagia to restore the running from the urethra. The patient, overhearing what was said, replied, that if that were all, he would soon find the remedy. He went away, and in eight days returned quite cured of his ophthalmia, and asked advice for the gonorrhœa, which he stated he caught from the person who communicated the first.

I have seen several cases of ophthalmia, and of ulcers on the eye-lids, in the nostrils, and on the lips, apparently occasioned by want of cleanliness and attention, when the patient touched his face after handling the parts affected with blennorrhagia or syphilitic ulcers. A case communicated by a practitioner of my acquaintance, confirms this suspicion. A man who had been in the habit of washing his eyes with his urine, followed the custom one day after an impure connection, without reflecting on the consequences; and he became affected with a dreadful ophthalmia.

SECTION II.—*Of Blennorrhagic Cophosis, or Deafness produced by the Suppression of Syphilitic Blennorrhagia.*

I have met with but only one case in my practice of complete deafness occurring after syphilitic blennorrhagia, which had been stopt on the thirteenth day, by the internal use of turpentine.

The patient was a robust young man, twenty-six

years of age; he had no shankers, and never had the slightest symptom of syphilis: he assured me that it was the first time of his being infected. The deafness was removed by a mercurial course.

Some authors state, their having observed an inflammation, with a discharge of puriform matter, affecting the ears, produced by a suppressed syphilitic blennorrhagia. In such affections of this organ I should not hesitate to advise the remedy proposed for ophthalmia produced by the same cause—the inoculation of syphilitic blennorrhagia.

CHAPTER VI.

Of Arthrocele, Gonocoele, or Blennorrhagic Swelling of the Knee.

A VERY considerable swelling of the knee, (sometimes of both knees, and the heel at once), attended by excruciating pains in the joint, sometimes occur in men after a blennorrhagia. These pains, accompanied by more or less of symptomatic fever, continue for two or three weeks, and gradually go off, leaving a stiffness in the joint, which lasts for many months.

This disease particularly affects young men, who after a debauch, have been infected with blennorrhagia, with which it seems to be intimately connected.*

* The disease is termed in English, a white swelling, because the colour of the skin is not changed. It is seated in the sacculi

It is surprising that no author, has treated of this disease, as the consequence or symptom of blennorrhagia. It is not very uncommon, for in the course of my practice I have seen six or eight cases, each of which came on about the eighth or sixth day of the blennorrhagia, and in every instance the discharge from the urethra was either sensibly diminished or totally suppressed.

For want of sufficient observation, I have not been able to determine the character of this disease; but in all the cases which have come within my knowledge, the disease appeared to partake of the character of gout; with this exception, that all the persons were about the age of twenty-three or thirty, that the colour of the skin was not changed, and that the swelling bore handling without exciting pain.

The swelling gradually disappears, by the free use of mild diluting drinks, and by frictions with the ammoniacal liniment; but above all with a liniment made of gum ammoniac dissolved in the vinegar of squills.

mucosi, found above the knee joint. It would be very desirable to ascertain, whether such blennorrhagia is not rather arthritic than syphilitic.

CHAPTER VII.

Of the Phymosis and Paraphymosis.

THE word phymosis is derived from the Greek *φύμιω*, præcludo, obturo, and is employed to designate this disease, in which the prepuce is so swelled and straitened, that it cannot be drawn back over the glans.

In Europe, many men have the prepuce naturally so tight that the glans cannot be exposed; this is the phymosis connata of Nosologists, which will not engage our attention.

The disease in question is an inflammation of the prepuce, accompanied by swelling, redness, and heat of the part produced by the syphilitic virus, or any other acrimony applied to the glans and prepuce, or poured out between the integuments forming the prepuce. It often proceeds from venereal ulcers on the inside of the prepuce or from the blennorrhagia balani.

To this disorder are especially subject those men who from nature have the glans covered with a more strait prepuce, or have too short or too strait a frænum: all those whose religion ordains circumcision are free from it.

It has been recommended in this disease, to slit up the prepuce, so as to bring the parts into view, and to admit the application of suitable remedies, or to prevent buboes, and the spreading of the ulcers when they occur. This operation is sometimes, absolutely necessary; but in my opinion it ought not to be performed

without sufficient reasons: for in the wound formed by the incision there often arise obstinate fungous excrescences more alarming than the original disease. Besides, the wound, by exposing a fresh and larger surface to the absorption of the virus, increases the danger of bubo. It is more advisable to obviate these evil consequences by topical applications, principally by injections between the glans and prepuce. If this is impracticable, and very violent symptoms appear, or the prepuce becomes affected with livid spots, recourse must be had to the operation, lest a more dreadful evil, a mortification should ensue.

In order to ascertain whether there is an ulcer between the glans and prepuce, I introduce a probe with some lint affixed to it, then turning it round the whole glans, the patient generally feels pain if there be any ulcer, as soon as the probe with the lint touches it; and upon withdrawing it, a part will be stained with purulent matter; whereas if there is but a simple discharge from the glans, without ulceration, no pain will be felt, and the whole of the lint will be equally stained with it.

If the symptoms are violent, benefit will be derived from local bleeding, principally by means of leeches. In less violent cases, the application of a poultice made with crumbs of bread and water with the acetite of lead, will be sufficient. I introduce sometimes a little mercurial ointment, or I direct injections between the glans and prepuce, three or four times a-day, either of a diluted solution of the nitrate or muriate of mercury, or of the solution of the sulphate of copper and the acetite of lead. The injection must be made to distend the space between the glans and prepuce. If there be any ulcer, some lint dipped in the same liquids may be applied to

it by means of a probe once or twice a-day. Mercurial fumigations are in this case often useful. I am of opinion, that there is no danger of the parts uniting, while the ulcers continue in a state of irritation; and when this state is removed, the phymosis generally disappears, so that the prepuce may be retracted. A course of mercury ought in such cases never to be omitted.

In phymosis, we often see the prepuce increase to an enormous size, forming rugged condylomatous excrescences. This has frequently misled practitioners to propose the amputation of the penis in the idea of its being cancerous. It is highly imprudent to advise the operation unless in cases of extreme necessity; for I have known the disease cured by a nourishing diet, tonic remedies, and the external application of the *lotio ad condylomata*, or *lotio syphilitica flava* (ph: syph:).

The great swelling of the prepuce, which sometimes continues after the more violent symptoms have abated, generally yields to topical mercurial frictions, and to the steam of warm water, or spirituous fomentations, keeping the penis tied up. In more obstinate cases, the external use of *cicuta*, or mercurial fumigations, prove extremely beneficial; but sometimes a portion of the prepuce must be removed.

SECTION II.—*Of the Paraphymosis.*

Paraphymosis, a word derived from the Greek *παρα*, et *φυμος*, *præclusio*, is a disease where the prepuce being drawn behind the glans, is so contracted there that it cannot be brought again forwards over the glans; and would for this reason, in my opinion, be more properly

named a strangulation of the glans. In the phymosis, the prepuce is principally affected; in paraphymosis, it is the glans which suffers and requires our immediate attention. The latter is the more dangerous disease.

Men who naturally have a strait prepuce are most subject to this disease, which arises, when the prepuce has been drawn back, at a time when the size of the glans, either from venereal ulcers, or from blennorrhagia, is preternaturally enlarged. The disease was well known to the ancients, and I have little to add to what Celsus has written on the subject.

I must only observe, that the principal danger is from a mortification of the glans. I have seen one instance, where a gangrene of the glans was the consequence of such a strangulation, before the surgeon could come to give assistance. We must therefore, without delay, endeavour to return the prepuce over the glans, by reducing the size of the glans, or dividing the prepuce.

The most effectual remedy for reducing the swelling of the glans, is to apply a cold solution of the acetite of lead, gently pressing the glans, and taking care not to wet the prepuce with the same. By these means the glans is so powerfully contracted, that the prepuce may be generally very easily brought forwards, and the complaint effectually removed. Or if this solution is not at hand, cold water may be sprinkled repeatedly on the part, in the mean time gently pressing the swelled glans with the fingers, repeatedly dipped in cold water, so as to squeeze out, if possible, all the blood extravasated in its cavernous substance. By these means, the turgescency of the corpus cavernosum glandis, will be most effectually diminished; and, by skilful management, gently pressing the glans backwards, whilst we endea-

your with the fingers of the other hand, to bring the prepuce forwards, we shall very often succeed, and relieve the patient from imminent danger. Ice, or water rendered as cold as ice, may perhaps be useful to the operator in accomplishing this desirable effect. If the disease be accompanied with syphilitic blennorrhagia, we ought to be cautious with regard to the application of cold, lest we bring on a worse complaint by retro-pulsion, than the disease for which cold is applied. If we should not be able to reduce it, and the symptoms be violent, we should not defer the operation, but make an incision in the prepuce or frænum; an operation by no means dangerous, but absolutely necessary to prevent the most disagreeable of all consequences of syphilitic complaints, a mortification of the glans penis. If there are ulcers on one side, I prefer always to make the incision of the frænum or prepuce on the other side, in order to secure the wound as well as possible from the poison, and to prevent its absorption by the lymphatics of the fresh wound.

CHAPTER VIII.

Of Cancer, Mortification, or Gangrene of the Penis; and of the Amputation of this Member.

FEW authors have written on this subject with precision. In practice, we meet with two cases, requiring the amputation or excision of the penis; the one, when

this part is attacked with cancerous ulcer; the other, when it becomes gangrenous.* They are rarely the consequence of the immediate action of the syphilitic virus. Phagedenic ulcers of this part generally proceed from bad treatment; often from the repeated application of the caustic to syphilitic ulcers; sometimes from the contact of air; and, still more frequently, from the long continued use of mercury, in the treatment of syphilitic ulcers: thus mistaking ulcers, now become mercurial, for syphilitic, as they originally were. These ulcers, however, arise sometimes from an herpetic, or a cancerous virus applied to the part; and, perhaps, from various acrimonies, with whose nature we are unacquainted. The cures of the hermit Heron, recorded by Palladius, is of this kind. The younger Pliny gives the history of a Roman, who drowned himself and his wife, on account of a similar disease.

These ulcers are characterized by their rapid progress, by hard inverted edges, by a copious, very fetid sanies, and by acute lancinating pains. The part being greatly swelled, compresses the urethra, and diverts the urine from its natural course, which becomes a fresh source of irritation aggravates the disease, and renders it incurable.

The gangrene of the penis originates from very different causes. 1. From a violent strangulation of the glans in paraphymosis. 2. From an infiltration of urine in the corpora cavernosa; and, sometimes, from a suppression of urine, or ischuria, in the urethra. 3. Gan-

* The ancients gave the name of cancer, to what we term gangrene, and reserved the appellation of carcinoma, to what is denominated cancer.

grene sometimes attacks the penis, as the consequence of violent inflammation. 4. In men having blennorrhagia, and attacked, especially in hospitals, with fever, accompanied with great debility of the system; as in the case of putrid fever, the penis is sometimes affected with mortification, in which case it frequently rots off. Hippocrates observed the same to happen to the testicles, by metastasis in fever.

For the treatment of phagedenic ulcers, I refer the reader to the eleventh chapter. But, when the organic structure of the penis is so altered and destroyed, that there is no hope of preserving it; or when the progress of the disease is so rapid and violent, that there is danger of its being communicated to the neighbouring and internal parts, and carrying off the patient: under these circumstances, amputation or excision of this member becomes necessary.

When gangrene appears on the penis, the cause must be removed, if possible, and its progress arrested, by the most powerful remedies, both internal and external. When the gangrene is checked by these means, nature frequently separates the dead from the living parts, without the aid of art: but if the gangrene continue to extend to the sound parts, and the disease is gaining ground, to save the life of the patient, amputation must be immediately performed.

The operation is very accurately described by Boyer, in the second volume of medicine illustrated by physical science. I shall transcribe his words.

The Amputation or Excision of the Penis.

Having covered the tumour with a piece of linen, I seized it with the left hand, and gently drew the skin towards me, and, with one stroke of the bistoury, I divided the skin, corpora cavernosa, and the urethra. With a pair of dissecting forceps, I seized the arteries on the dorsum penis, and, gently drawing them towards me, I applied the ligature. The same operation was performed on the arteries of the corpora cavernosa. These vessels being secured, I introduced a catheter in the form of an S, into the bladder, dressed the wound with lint, which I retained by long crucial compresses, open in the center, so as to allow the passage of the sound. The ends of these compresses were covered by the strips of the T bandage, to which the catheter was likewise fixed by small tapes. These were the principal dressings. I must observe, that the ligatures came away on the tenth day, and the suppuration was well established at that period: the catheter was retained till the cure was complete, withdrawing it occasionally, to have it cleaned. On the forty-fifth day, the wound was entirely cicatrized, and the patient left the hospital perfectly cured.

In regard to the catheter introduced into the urethra, to facilitate the application of the dressing, and the passage of the urine, and to prevent the closure of the urethra, Ledran advises its removal, whilst the wound is suppurating, and to introduce it again when the cicatrization begins, to prevent the contraction of the urethra; but, it appears to me more advantageous,

to allow the instrument to remain till the cure is complete, lest the urine should wet the wound, and thus retard the cure.

In gangrene, we may sometimes dispense with the ligature of the vessels; but, lest their diameter should be increased, as happens in carcinomatous tumours, the ligature is to be preferred, as the best means of preventing a dangerous hemorrhage. The arteries, which should be tied, are those which run along the membrane of the corpora cavernosa, and termed arteriæ in dorsum penis, and also those which proceed through the middle of the corpora cavernosa, and the corpus spongiosum. These arteries can generally be taken up with the forceps, but, when this cannot be accomplished, the needle armed with a ligature must be employed.

I shall conclude, with recommending attention to the precept given by Ledran, to divide a larger portion of the skin than of the corpora cavernosa, in the amputation of the penis; for, neglect of this will render the application of the ligatures to the vessels very difficult, on account of the retraction of the corpora cavernosa towards the pubes, for then the extremity of their body is covered with the skin, and prevents the vessels being discovered.

The fear of hemorrhage has frequently prevented this operation, and has induced Heister and Bertrandi to prefer the ligature of the penis; astringents, and even the application of the cautery have been recommended after amputation. It appears to me, that the compression or ligature of the vessels ought to be employed, according to the distinctions I have offered.

Compression answers when the operation is per-

formed in case of gangrene; for then the diameter of the vessels is not increased. In order to make this compression, the catheter is first introduced into the bladder, then small pledgets are applied to the wound; after applying a sufficient quantity of lint, small compresses are to be applied cross-wise, and the ends secured by the T bandage, the ends being fastened with pins. This simple process is preferable to the compression recommended by Salucci.

CHAPTER IX.

Of the Ischury and of the Urethral Dysury.

THE total suppression of urine is termed ischury, from the Greek (*ἰσχρία* suppressio s. retentio urinæ) and the incomplete suppression of urine, or the difficulty of voiding the urine in a full stream is called dysury, (*δυσουρία* difficultas urinæ s. difficilis urinæ excretio.) When either of these diseases is seated in the urethra we add the term urethral: thus we say ischuria urethralis, dysuria urethralis, to distinguish them from those seated in the bladder, ureters or kidneys, which are termed ischuria vesicalis, ureterica, renalis. The addition of the term syphilitic more particularly designates those which originate from the syphilitic virus of recent or of ancient date.

Both these diseases of the urethra seem to have been unknown to the ancients. In the Greek and Latin authors, we meet with nothing concerning those diseases of the urethra, so prevalent at the present day in Europe.

The ischuria or total suppression of urine is an acute disease, frequently attended with danger and requiring immediate relief. The dysury or partial suppression is generally a chronic disease.

The immediate causes of both diseases are, 1. A violent inflammation in some part of the urethra or at the neck of the bladder. 2. A spasmodic contraction in these parts. 3. A compression of the neck of the bladder or of the canal of the urethra caused by a swelling or scirrhus of the prostate or of some other gland in the urethra. 4. A projecting cicatrix from a wound or ulcer, or 5. A warty or fungous excrescence in the canal of the urethra, commonly known by the name of caruncle or carnosity. 6. A contraction of the canal, produced by a thickening of the membranes of the corpus spongiosum urethræ.

The two first causes generally proceed from the syphilitic virus actually lodged in the urethra, and are the consequence of a suppressed syphilitic blennorrhagia, or of syphilitic ulcers in the urethra. The others are commonly the dreadful though late effects of improper treatment of blennorrhagia, by acrid, stimulating and astringent injections, &c., and it is probably from the abuse of these remedies that the disease is now so frequent in Europe.

As the radical cure of these diseases depends on an accurate knowledge of these causes, we shall describe them more fully.

Whenever the running of syphilitic blennorrhagia is suppressed, the virus appears to be conveyed higher up the canal of the urethra, and there excites an irritation and inflammation, analogous to what had been excited in the original spot in the fossa navicularis, &c. If it is lodged in the veru montanum, and irritates the orifices of the vasa deferentia, it produces, as was formerly observed, a swelling of the vas deferens and epididymis, commonly called a swelled testicle. If carried higher up the urethra and lodged near its extremity, it occasions an irritation and a spasmodic constriction, or a violent inflammation at the neck of the bladder, very often accompanied by a total suppression of urine. Some authors attribute these symptoms to a sympathetic affection, and consequently, deny the translation of the virus from one place to another. The effects are the same according to either hypothesis.

In other instances the irritation and inflammation caused by the acrimony of the virus, or by other circumstances, is so violent, that an ulcer is produced in some part of the urethra, or a tumour arises in some gland in the urethra: this ulcer or tumour becomes in the end, the former by cicatrizing, the latter by gradual increase in size, the cause of a contraction or coarctation in one or more places in the urethra, which in the beginning impedes the passage of the urine, and generally terminates, sooner or later, by a complete suppression. The cicatrix or tumid gland forms a kind of knot or protuberance, obstructing the passages: sometimes the ulcers, in cicatrizing, form granulated excrescences, which, under the name of caruncles or carnosities, in the end produce the same effect as a projecting cicatrix.

When the prostate gland is affected, it forms a hard tumour or a fungous excrescence, which projects into the urethra or the neck of the bladder, and thus produces at first a partial, and by degrees a total obstruction in the canal. From anatomical dissections we learn of late that two ulcers situate on opposite sides of the urethra, or a single ulcer extending far round the canal, by approximation and union, frequently form bands crossing the urethra; and while the lower parts of the urethra remain open, and continue to furnish the purulent discharge spoken of in the chapter on *Blennorrhœa*, the parts higher up, as it were engrafted, diminish or close the canal of the urethra, and thus prevent the free passage of urine. But the more frequent cause of the dysuries of the present day, is the straitening or coarctation of the canal of the urethra, produced by a thickening of its membranes.

These contractions are usually confined to one part of the urethra, but sometimes they occur in two or three different places. They are either simple, or combined with ulceration; and in this case there is a genuine purulent discharge. (*Pyuria*).

In many of these cases, the patient, especially while he leads a sober and quiet life, is able to make water pretty freely, though he is long in the operation; and the disease continues for months, and even for years, without his experiencing much inconvenience. But by the advance of age, or on committing excesses in eating and drinking, or on taking too violent exercise, and especially on long journies in winter, the disease grows worse, the urine is discharged in drops, or in a small interrupted stream, exciting great pain; or the passage

is stopped entirely, and thus endangers the life of the patient. In these cases, if the disease is seated high up the urethra, or at the neck of the bladder, the urine sometimes forces its way into the rectum, and is evacuated by the anus; but more frequently the urine is collected behind the stricture, where it forms a pouch, and by its acrimony soon produces an abscess, which being neglected, occasions sinuses and fistulas in the perinæum, scrotum and rectum. Sometimes an abscess is formed in the perinæum, without the patient's suspecting the cause. At other times the urine opens a passage, and is extravasated into the cellular membrane, and produces immediate gangrene.

The consequences or effects of these contractions or coarctations of the urethra, are, 1. The inflammation, ulceration, and abscess in Cowper's glands, or in the prostate, extending to the surrounding cellular membrane. 2. The gangrene of the genital organs and of the urethra. 3. Sometimes a very considerable thickening of the coats of the bladder. From the great efforts at contraction in the bladder, to overcome the obstacle opposing the free discharge of the urine through the urethra, if the disease has continued any time, this viscus becomes altered in structure, more irritable, and the contractions are painful. Dissection of the dead body has shown in these cases, the whole substance of the bladder greatly thickened. These effects depend on the resistance caused by the obstruction in the urethra, as well as on the accumulation and acrimony of the urine. 4. The rupture or paralysis of the bladder. 5. A morbid affection of the ureters.

The ulcer is generally seated behind the stricture, sometimes in the stricture itself, which being destroyed

by the ulcerative process, is eventually cured. If an erosion occur in the internal membrane of the urethra, the urine will infiltrate into the cellular membrane of the penis and scrotum, and spreading to the neighbouring parts will occasion swelling and inflammation, abscesses and fistula in the perinæum, scrotum or rectum; sometimes from the acrimony of the urine, the irritation terminates in gangrene or mortification of the cellular membrane, and skin of the scrotum and penis; when the erosion occurs near the prostate gland, the urine forms a circumscribed tumour and opens its way into the rectum, or the cavernous substance of the urethra, producing mortification.

We have stated that the obstructions generally proceed from the irritation and inflammation excited by the syphilitic virus, or by some other acrid or stimulating matter; they are however sometimes produced by other causes, as calculus or swelling of the glands of the urethra; but these are of rare occurrence. Ancient writers, and even those who first described blennorrhagia, take no notice of these obstructions as the cause of ischury or dysury.

J. Hunter states in his treatise on the venereal disease, that the obstructions in the urethra are never the consequence of a previous blennorrhagia. What has probably given rise to this assertion, in opposition moreover to fact and common observation, is that, 1. These obstructions in the urethra never occur, till long after the blennorrhagia has ceased. 2. And they are not generally situated in the same part with blennorrhagia. I do not pretend to explain this; but it is a fact, that until blennorrhagia was so common, obstructions in the urethra were not so frequently observed in Europe.

Among the moderns, some have asserted that excessive venery, others that the too free use of wine and spirituous liquors, sometimes produce scirrhus tumours of the glands, or strictures in the urethra. I will not deny the fact: but I doubt that these causes alone, without blennorrhagia or injections, ever produced these complaints; nor do I believe that scurvy, scrofula, or any other constitutional affection ever produced them.

But I shall confine myself, in this chapter, to the description of those strictures, or coarctations of the urethra, which proceed from blennorrhagia, ulcers, or injections improperly used. I shall only observe here, that similar coarctations sometimes occur in the vagina of women, and sometimes also at the anus; but such cases are rare.

The obstruction of the urethra, proceeding from the foregoing causes, would never be a severe disease, and rarely dangerous, were it not for the retention of urine; for the most alarming symptoms, as the irritation, inflammation and ulceration, fistula and gangrene which occur between the obstruction and the neck of the bladder, as likewise the affection of this organ, are the effect of the quantity and quality of the urine collected behind the stricture.

Excess in eating and drinking, violent exercise, the act of venery, and suppressed perspiration, uniformly aggravate the symptoms of dysury, and frequently endanger the life of the patient. This danger is in proportion to the degree of obstruction in the passage, and the irritability of the parts, to the age of the patient, and to the duration and progress of the disease. I must observe, that a small obstruction in the urethra of a

man, who indulges to excess in the pleasures of the table, frequently produces violent irritation.

Of late it has been questioned, whether the urethra could be affected with spasm, since it is totally unprovided with muscular fibres, and consequently not endowed with muscular power. I will not dispute about words; but I shall only observe, that when I perceive in the same person the urine sometimes flowing freely, at other times with difficulty, or even entirely stopped; when I see the bougie introduced as far as the stricture, sometimes pass it, at other times this is impossible; that in some instances there is a free stream of urine; that in others not a drop of urine passes, though in the former the bougie could not be introduced, and in the latter it was introduced—I am led to believe, that these symptoms depend upon a sudden, violent contraction, partial and of short duration, give it what name you will. Besides, the existence of a spasmodic contraction in the *acceleratores urinæ*, and in the sphincter of the bladder has never been denied.

This disease is the more dangerous, when there is a difficulty in determining, and in removing the cause which produced it; when the disease is seated high up the urethra, and when the irritability of the bladder is very great.

To form a just diagnosis and a correct prognosis in this disease, we must first be informed whether the patient has ever had blennorrhagia before; how long it lasted; what was the method of treatment; what part of the urethra was principally affected; what interval of time has elapsed between the blennorrhagia, and the period when the obstruction or dysury became manifest. We must next be informed of the actual state of

his health; of his manner of living; of his age and constitution;—we must enquire whether he is subject to warts and excrescences; what remedies have been employed in the present disease; whether he can void his urine; what is the nature of the stream, whether large or small, single or forked. But the physician must not be satisfied with the answers of the patient; he must examine with his own eye the state of the stream; he must again ask the patient, whether he can retain his urine for any length of time, and whether he voids it in large quantities, and whether the disease is accompanied by any running, &c.

In using the bougie to discover the seat of the disease, we should attentively observe what difficulties oppose its passage; whether it stops in one or more places in the urethra, and particularly in what part; whether it reaches the bladder; whether it is easily withdrawn; and when withdrawn, whether its surface is moist or dry, and whether it is moist in one or more places. Finally, we must examine and ascertain whether there are any symptoms which indicate or excite a suspicion, that besides the obstruction in the urethra, the sphincter of the bladder, the bladder, and even the kidneys are affected; and whether the symptoms of irritation experienced by the patient, are produced merely by the urine, or whether they do not rather depend on the induration or ulceration of the prostate, or the thickened state of the coats of the bladder, or some other organic disease of this part.

We sometimes can feel the tumefied glands, or some part of the urethra indurated, especially after having introduced the bougie or catheter; and then this operation procures a free evacuation of urine, as likewise

when the disease depends on warts or excrescences; but this advantage is only temporary: the use of the bougies must be continued for a length of time, perhaps aided by other means.

When there is an organic disease of the bladder, the patient can never retain his urine long enough to void a large quantity at a time. If in this case the bougie or catheter is employed, the quantity will be small: whereas if the bladder is sound, or but slightly affected, the patient will void a larger quantity at a time, provided there is no obstacle or disease in the ureters or kidneys.

It is of consequence to observe here that if there is an ulcer in the urethra, at the neck of the bladder, in the bladder itself, in the ureters, or kidneys, the disease will always be accompanied by pyury, or a discharge of purulent matter with the urine. If the bladder or kidneys are affected, though the patient voids his urine regularly, pus is discharged, mixed with urine or alone, after the last drops of urine; but if there is an ulcer at the neck of the bladder or in the urethra the pus is voided with the first emission of urine. We can thus ascertain, and often in a very satisfactory manner, the seat of ulceration in the urethra, by the pain the patient feels in a particular spot on introducing the bougie; and a small quantity of matter frequently adheres to the instrument on its being withdrawn.

But an ulcer behind the stricture is always a dangerous disease, whether it proceed from a violent, ill-treated blennorrhagia, or from the acrimony of the urine, retained between the bladder and the obstructed spot; for if not cured in time it terminates in an abscess or fistula in the perinæum, or in an infiltration of urine into the

surrounding cellular membrane, followed by gangrene and often by death.

Before the urine forces its way through the perinæum, a hard red tumour between the size of a hazel-nut and a hen's egg, resembling an abscess, generally appears behind the stricture. The patient must be early apprized of the danger attending such tumours if neglected; and an incision or opening should not be long deferred.

When a stricture or indurated glands appear in the urethra, particularly in men addicted to hard drinking and subject to pimples, the dysury is frequently accompanied by an acrid, ichorous discharge, which must be distinguished from a discharge of the prostate liquor; this last resembles the white of an egg and has a disagreeable nauseous smell.

Method of Cure.

On being called to a patient affected with ischury, or a total suppression of urine, the state of the pulse must first be examined: if hard and frequent, bleeding will be necessary. The quantity of blood to be taken is to be regulated by the state of the pulse and constitution of the patient. A man of a strong constitution and plethoric habit, will bear the loss of a pound; whereas half that quantity taken will operate sufficiently, and have the same effect, upon a tender and delicate habit. It ought however to be observed, that in such cases the patient will derive more benefit from one copious bleeding, than from one or two small ones successively performed. After bleeding, or not, when the system is not

affected, the bladder if much distended, ought to be evacuated and the catheter applied for that purpose. Its application however, in those circumstances is often very difficult and sometimes utterly impossible. This is certainly often owing to the cause of the disorder, for there is more difficulty when the coarctation depends on an old complaint in the urethra, than when it proceeds from a suppressed blennorrhagia or from a recent inflammation and irritation in the urethra; but much depends upon the skilful management of the surgeon.

In order to facilitate the introduction of the catheter (after general and topical bleeding and the exhibition of a glyster which should always precede) I have found the following management to be useful. The catheter being anointed with sweet oil is to be introduced gently. As soon as we meet with any obstacle, care ought to be taken not to force the instrument, but to wait a little, and then try to push it on gently; because this obstacle seems sometimes to arise only from a momentary spasm of the urethra, excited by the mechanical irritation of the catheter itself; which if we discontinue pushing, frequently will go off in a few minutes, and the catheter is then easily introduced farther: whereas if we continue pushing, the spasm becomes more violent and renders the introduction often utterly impossible. It is owing probably to this spasm that we see sometimes that one surgeon succeeds in introducing the catheter, while another, by no means inferior in skill and talents, had before tried it in vain. If the obstacle be at the *caput gallinaginis* or further up, we may very often remove it by introducing a finger in the anus, or by gently rubbing the perinæum, and thus assisting the catheter. I have seen instances where the introduction of the

catheter proved impossible while the patient was lying in bed; whereas it went in very readily on the patient's sitting on the edge of the bedstead, his feet hanging down. I have also observed where a large one was easily introduced, after a small one had been repeatedly tried without success.

Sometimes the catheter passes into the bladder, and the urine does not follow, unless the lower part of the abdomen be gently pressed; this proceeds from the loss of contractile power in the bladder. A great distension frequently induces a paralysis of the bladder. Sometimes the orifices of the catheter are closed by mucus or coagulated blood; this obstacle may be removed by injecting through the catheter.

I have been minute in enumerating all these circumstances, because I am fully persuaded, that by a careful attention to these points, we may not only often spare our patients a great deal of pain, but, what is more material, prevent a general infection, which easily happens, when, by a rude treatment, the urethra has been wounded. I have certainly seen the most evident symptoms of syphilis in the mass from such a cause, when the patient had a simple ischury, proceeding from a suppressed blennorrhagia.

If the danger is not very great, that is, the bladder not very much distended, consequently, the evacuation of urine not very pressing; or, if a considerable phimosis renders it difficult to discover the orifice of the urethra; or, finally, if the introduction of the catheter is prevented by any other cause, other means must be employed to procure a discharge of urine, of which I have found the following the most efficacious:

1. A common glyster should be administered, in order

to evacuate the fæces, and thereby prevent the constant stimulus which their accumulation is apt to excite. 2. The patient should go into the warm bath, and remain there half an hour; and this should be repeated four or five hours after. If there is a difficulty in procuring a warm bath, the patient should set on a perforated chair, and receive the steam of hot water and vinegar, for half an hour or an hour. I have often found this process as serviceable as the warm bath, &c. 3. Before, or after either of these means have been employed, the patient should receive a small glyster, composed of equal parts of barley water and linseed oil, with fifty or sixty drops of laudanum, to be repeated at discretion. Every thing should be avoided that can increase the secretion of urine; and, for this reason, the patient should drink, even of barley water, only enough to quench his thirst.

In obstinate cases, a trial should be made of the method recommended by Dr. Hamilton, of Lynn, published in the sixty-sixth volume of the Philosophical Transactions for the year 1766. He found a large dose of the submuriate of mercury, combined with opium, very beneficial. He prescribed a bolus, containing ten grains of the muriate (submuriate) of mercury, and two grains of opium; and repeated this dose six hours after, if the first did not produce the desired effect; and he frequently had occasion to give a third dose.

In many apparently hopeless cases, I have had the satisfaction to see the judicious applications of these different means prove successful.

I once saw in a suppression of urine, where the catheter could not be procured, the application of a roasted onion to the perinæum produce the happiest effects; for

two hours after there was a copious discharge of urine. The life of a celebrated physician in the army was saved, by covering the glans penis, according to the advice of an old woman, with the fresh pellicle lining an egg-shell. The moment this pellicle, in drying, began to contract, the urine came away in large quantity. But two days after, the ischury returned unexpectedly; recourse was again had to the pellicle, but it failed, as the midwife predicted, and, for want of a catheter, the patient died. Finally, the immersion of the glans penis in very cold water, by removing spasm, has been known to relieve a suppression of urine.

J. Hunter recommends the use of the bougie, and when it cannot pass the stricture, to leave it in the urethra, near the obstacle; he states, that the desire to make water will be excited; and he assures us, that on withdrawing the bougie, he has frequently known the urine to be discharged in great quantity. The same author informs us, that to remove, and even to prevent this spasmodic contraction, he has obtained benefit from slightly irritating injections, or from a bougie three or four inches in length, and covered with some irritating medicine, which is to be retained in the urethra as long as the patient can bear. This method has removed for some weeks, and even cured, this kind of spasmodic dysury. I relate these observations, as they may be of service in difficult cases; though I have never employed either of these remedies.

When we have succeeded in evacuating the bladder, either by the introduction of the catheter, or by the other means proposed, our next care should be to prevent a fresh accumulation of urine, and to remove, as early as possible, the cause of the suppression. The

first indication will be fulfilled by continuing the same remedies, and especially, as some authors have recommended, by leaving the catheter in the urethra. This is what few of my patients would submit to in the beginning. They suffered so much by retaining the catheter, whether made of silver or steel, whether stiff or flexible, that they were convinced that it occasioned more pain than the repeated introduction of the instrument or a fresh accumulation of urine; and, consequently, they withdrew it, notwithstanding they wished to retain it. We have not been near so much exposed to this inconvenience, experienced from the common catheters, since we have been in possession of the gum elastic catheters, so nicely fabricated by Bernard, Faubourg Germain, Cour du Commerce, in Paris.

In cases of ischury or dysury, proceeding from obstruction in any part of the urethra, bougies or catheters are the principal means for affording relief, or for effecting the radical cure. When the obstruction depends on a stricture in the urethra, or a thickening of its membranes, or an ulcer in this canal, or on a temporary tumefaction of the glands of Morgagni, or those of Cowper;—in any of these cases, bougies I believe will effect a radical cure; for if we once succeed in passing the smallest bougie through the stricture, we may, by the gradual use of larger bougies, succeed in passing one of the natural diameter of the urethra, which should be continued a sufficient length of time.

When the suppression of urine is produced by a scirrhous of the glands of the urethra, of the prostate, or by excrescences in the urethra, though the bougies can never accomplish a radical cure, they procure relief by facilitating the evacuation of urine. Gum

elastic catheters are particularly adapted to this purpose; but when not at hand, elastic bougies prove extremely beneficial.

I have stated that, in these cases, bougies may at least afford a momentary relief; because I know of no medicated bougies capable of producing a radical cure, and of destroying the excrescences and scirrhus tumours arising in the urethra, and obstructing this canal. The bougies that can be used with safety act mechanically: the mildest are the best, and I have never met with a patient who could bear the irritating bougies long enough to obtain any good effects from their use.

In these cases, if the bougie is employed it must be introduced when the bladder is full, and after having passed the obstruction, it must be withdrawn gently, the patient being directed to continue at this time his efforts to void his urine. In this way, the stream of urine follows the bougie, and preserves the passage free; but the stream diminishes the instant the tumefied gland or excrescence rises again in the cavity of the urethra; and the operation must be repeated whenever there is occasion to evacuate the urine.

To the young practitioner, the following rules, to be observed in the application of bougies or elastic catheters, may perhaps, be acceptable.

The instrument, after being anointed with sweet-oil, is introduced in the common manner. The surgeon, as usual, gently draws with one hand the urethra towards him, and holding the catheter with the fingers of the other, always at the distance of an inch or two from the glans, gradually introduces it. The catheter generally enters the bladder without any particular direction

from the hand of the operator. If any resistance be experienced, the instrument should be gently turned on its axis, and the other rules, mentioned above, are to be observed, to facilitate the introduction; but, if the resistance be at the neck of the bladder, there is nothing more to be done, than gently pushing the instrument forward, and assisting or directing it with the finger in the anus. If the surgeon finds the obstacle greater, he should suspend the operation till the contraction or spasm of the sphincter vesicæ and the resistance cease, when he is generally able to pass it into the bladder.

After the elastic catheter has remained in the urethra for some time, on being withdrawn, it is generally very soft, and therefore unfit for being used again, until it has been cleansed and dried, and put for a little time in a cold place, which restores it to its former texture. The method of cleansing it is to wash the outside with water, and likewise the cavity with the same, applied by rinsing. For cleansing and drying its inside, a long needle with a silk thread will be most fit. When about to be used, and found to be too stiff, it may be softened by keeping it a little while in the hand, or holding it near the fire.

If the stricture is considerable, and we cannot pass the bougie or elastic catheter, we must endeavour to introduce a catgut, for when once the difficulty is overcome, we may hope to save the patient from imminent danger. We must first endeavour to introduce the smallest catgut, gently, patiently, and yet with a slight degree of force. If we do not succeed, the catgut must be retained, applied near the obstacle, and fastened on the outside, so that it may not change its place. In this way, we may succeed in passing the instrument in the

course of some hours or days. Having passed the obstacle, the instrument can be easily withdrawn, if the desire to make water require it; otherwise, it may remain for some time, so as to allow it to swell; and immediately on withdrawing it, a larger one is to be introduced. When we have passed the largest sized catgut, we may employ the elastic bougie.

But if all our endeavours to introduce a catheter or catgut have proved unsuccessful, and the danger of a rupture or paralysis of the bladder from its distension be imminent, the urine must be at all events discharged. If the seat of the disease is within our reach, an incision should be made into the urethra, behind the stricture. In this case, the urine very frequently produces a smaller or larger tumour in the urethra, between the obstruction and the bladder: this spot should be chosen for the incision. By this means, the urine will be evacuated whenever there is occasion, and the danger of an ischury is no longer to be dreaded. The wound may be easily dilated, by passing the bistoury through the stricture, and then a bougie should be introduced, which the patient should wear till the stricture is destroyed, and the wound cicatrized. If the disease is at the neck of the bladder, and there is difficulty in making a proper incision, the bladder may be punctured through the rectum, as proposed by Fleurant. These operations are neither difficult nor painful, and they are sometimes necessary to save the life of the patient.

Doctor Hamilton has performed the operation proposed by Fleurant, in several cases, with success. See *Philosophical Transactions*, vol. 66. The bladder is often very prominent towards the rectum. Doctor Hamilton withdrew the canula of the trocar, as soon as

the discharge of urine ceased. He was surprised, that the urine was retained till the bladder was filled; and then it flowed freely per anum. Fleurant and Pouteau kept the canula in the passage, but, according to the observation of Doctor Hamilton, this is not always necessary.

The puncturing the bladder through the rectum is equally adapted to an ischury, proceeding from an inflammation of the neck of this viscus.

If the patient is opposed, or if there are objections to this operation, if the patient is very thin, and the distended bladder can be felt above the pubis, or through the rectum, an incision may be safely made above the symphysis pubis, and the bladder punctured below the peritonæum; the canula which has been introduced should be retained, till the cause of the suppression of urine is removed, lest the urine should infiltrate the cellular membrane of the abdomen, and produce more dangerous consequences than the original disease. The canula should be curved, and of such length that its convexity may be applied to the posterior part of the bladder.

When the above means have failed, or have been too long deferred, the collected urine forces, as stated above, either by its quantity or acrimony, a passage behind the stricture into the cellular membrane. And this infiltration of urine frequently terminates in a mortification, and in the death of the patient.

To prevent this fatal catastrophe, the instant the urine is extravasated, incisions must be made, to give free vent to this fluid. An incision should be made particularly behind the stricture. In some cases, it may be necessary to puncture the bladder, to give free vent to the urine,

and arrest the gangrene of the parts where the extravasation has occurred. The most antiseptic fomentations, as the infusions of cinchona, of the root of the *arnica montana*, with the addition of spirits, should be applied at the same time to the swelled parts. Large doses of cinchona and of opium, should be administered internally. If by these means we are so fortunate as to preserve the patient's life, we should in a few days attempt to form a passage through the obstruction, by the methods already proposed, by the introduction of catgut, and by an incision through the stricture.

Sometimes the bladder, from being over-distended, bursts; this is always a fatal occurrence. At other times this distension destroys the power of contraction in the bladder. If the sphincter, at the same time, retains its natural power of contraction, the urine is not voided, and this is a paralysis of the bladder, (*Ischuria vesicalis paralytica*): or the sphincter having lost its contractility, the urine cannot be retained, and is discharged in drops as fast as it flows from the ureters into the bladder; and this disease nosologists have termed *enuresis paralytica*. The first complaint requires the use of the catheter, pressure on the abdomen, frictions, and aromatic fomentations, to which the acetite of ammonia may be added; advantage will be derived from a blister applied to the sacrum. This latter remedy applied to the perinæum, should be directed in the relaxed state of the sphincter. In both diseases, cantharides are advantageously exhibited either in substance or in tincture.

These, in general, are the means suited to afford relief in cases of ischury proceeding from disease in the urethra. But to effect the radical cure of this complaint, the cause must be destroyed; and this is to be

accomplished by different methods, according to the different nature of this cause.

If the suppression of urine is the consequence of inflammation, or a spasmodic contraction in the neck of the bladder, produced by the syphilitic virus recently applied to the urethra, or by the suppression of the discharge in syphilitic blennorrhagia; the indications in the first case, are to mitigate the symptoms of blennorrhagia, by the remedies indicated in the first chapter; and in the second, to endeavour to restore the running, by the remedies indicated for that purpose in the same chapter. I shall only observe, that the application of the steam of hot water to the perinæum, and the use of opium, are the most efficacious means for obtaining this effect. Sometimes the ammoniacal liniment has proved successful. The patient should keep his bed, and apply the suspensory bandage, for I have known the irritation on leaving the neck of the bladder, instead of returning to its original seat under the frænum, settled at the veru montanum, and thereby produced a swelling of the testicles, which I have never noticed since I have directed my patients to observe this precaution. I think I have seen good effects from warm emollient poultices applied to the penis, and it is prudent to prevent, by means of glysters, the accumulation of fæces.

As soon as the irritation leaves the neck of the bladder, and the disease occupies its original seat, the running is restored, and should be treated as a common blennorrhagia. But the patient should be directed to avoid most carefully, every cause capable of occasioning a similar suppression, for we daily observe, that when a suppression of blennorrhagia has once occur-

red it is likely to return, and often on the slightest occasions.

I must farther observe, that in such cases, after the ischury has been removed, to obtain a radical cure, it will generally be necessary to administer mercury internally; for the syphilitic virus is very often absorbed during the suppression, and infects the system, though the local disease of the genital organs has been perfectly cured.

If the partial or total suppression of urine proceeds from a chronic affection, as a stricture, callosity, a cicatrix, or an excrescence, simple, or accompanied by ulceration in the canal of the urethra; we must attentively examine the state of the patient's health, his temperament, age, the degree of violence in the disease, its duration, the degree of irritability possessed by the patient, and his mode of living. All these circumstances must be attentively considered, before we determine on the regimen, and on the method the best adapted for the radical cure of the principal disease.

But before we undertake the treatment of such a disease, it will be prudent to inform the patient that the cure will require some time, generally two or three months, and often much longer, to effect the radical cure; and therefore, that great attention and perseverance will be required on his part.

When there are no dangerous symptoms, or when the urgent symptoms of ischury have been removed by the means I have proposed, we should endeavour to destroy the coarctation of the urethra and its cause, so as to prevent, for the future, any suppression of urine; which will be principally effected by the application of bougies. If the patient is of a strong and plethoric con-

stitution, a light diet should be prescribed. If on the contrary, he is weak and very irritable, we should be less strict in this respect.

The application of the bougies requires particular care and attention. In some cases of dysury we observe a surprising degree of irritability in the urethra and bladder. This requires particular attention to the composition, figure and size of the bougies, and to the manner of introducing them. Dr. Osborn, of London, has given a very interesting observation, which proves the advantage, and even the necessity of beginning with the use of mild and pliant bougies. The patient in question could not bear a common bougie in the urethra, so great was the irritability of this part: his friend was apprehensive of a cancer. He was cured at the end of six months by the use of bougies, made merely of yellow wax, and he had been ill for fifteen years. When the patient complains of pain, the bougies are either too irritating, too large, or improperly applied. We should begin with bougies, smaller than the natural diameter of the urethra, and gradually employ larger ones. The bougie should always be of a size proportioned to the stricture in the urethra; at first, of such a size as readily to pass through the stricture, and to be increased in proportion as the stricture is enlarged; and at last, of a size corresponding to the natural diameter of the urethra. If common bougies are used, they should be composed of soft materials, and as those in the shops are not to be depended on, every practitioner should prepare them himself. For my own part, I never employ the common bougies, since Bernard has manufactured the bougies and the catheters from the gum elastic, in their present state of perfection.

In the beginning, the patient should retain the bougie for a quarter or half an hour; afterwards for several hours morning and evening; and finally, all night if he can bear it. When elastic bougies can be procured, this precaution is hardly necessary, for the bougie becoming soft and flesh-like in the urethra, causes no inconvenience.

If the coarctation or obstacle is so great as not to permit the introduction of a small bougie, a small catgut will sometimes succeed admirably. This instrument once introduced, is to remain in the urethra for some time, or as long as the patient can bear it; it gradually swells, by which means the contracted passage is insensibly enlarged, so that on withdrawing it the first time, the patient is sometimes able to void his urine with unexpected ease; and afterwards a larger catgut may be easily introduced, which occasions a farther dilatation of the stricture. When we have thus succeeded in gradually dilating the canal of the urethra, so as to admit catgut of the largest size, bougies may be introduced, and employed for several weeks or months, till the patient is perfectly cured and able to void his urine in a full stream.

The best time for introducing the catgut or bougie, is in the morning when the patient is lying down; sometimes we succeed better if the patient is seated at the edge of the bed with his feet to the ground. The bougie should not be kept applied if it causes much pain, and sometimes many days pass before the patient can bear it for any time. The bougie or catgut once introduced should be fastened for fear of its slipping into the bladder, of which I have seen some melancholy instances. For this purpose a thread is tied to the

bougie, and then carried loosely twice round the glans penis.

If the bougie should unfortunately slip within the urethra, no means should be neglected for immediately extracting it, even by an incision in the urethra; for if allowed to remain, it might slip into the bladder, and thus become a nucleus for the formation of a calculus, or it might soon occasion great irritation and death. Bougies of great length ought not to be employed, lest the extremity should irritate the bladder. In general, the bougie should extend no more than an inch or an inch and a half beyond the obstruction; and ought not to exceed seven or eight inches, the usual length of the urethra.

The bougie or catgut should never be introduced with force; for in many instances, through inattention to this rule, instead of passing through the stricture, the instrument has been forced into the corpus cavernosum, urethræ, or into the rectum. It will be prudent always to adapt the size of the bougie to the irritability of the patient, and the ease with which he can bear it. After the largest bougie which we intend to use has passed into the urethra, and the obstacle is completely removed, the patient must continue to use it for a month or two; at first for one hour twice a-day, then once a-day, then every other day, and then every four or five days for some months; and even afterwards, the bougie should be passed occasionally for a year or two, so as to insure the proper state of the urethra.

As a general rule in the treatment of strictures by means of bougies, the longer the patient retains the instrument, the more advantage will be derived. In persons obliged to be much abroad, or to take much exer-

cise, the bougie should be applied in the evening and retained during the night, or at least the greater part of the night.

The symptoms which attend the application of the bougie, principally in the beginning, as uneasiness, weakness, swelling of the testicles and inguinal glands, and other affections of the urethra, ought to occasion no anxiety; they will soon disappear when the patient is once accustomed to wearing bougies.

In general, the patients who from the very great irritability of these parts, cannot retain the bougie long in the beginning, will bear it more readily at the end of a few days; it is however prudent to moderate this excessive irritability by general or topical bleeding, warm baths or the topical application of steam, by sedative ointments and fomentations, by anodyne glysters, and a suitable diet. Sometimes the topical cold bath, and the internal use of cinchona prove beneficial. The bowels should always be kept open, and this is easily accomplished by the use of the *oleum ricini*.

The slight degree of irritation excited by the bougies frequently produces suppuration, or the constant secretion of matter; which, together with the gradual dilatation of the urethra, tends to destroy the stricture or obstruction. If indurations are observable exterior to the urethra, the action of the bougie will be advantageously aided by emollient cataplasms; or according to circumstances, by mercurial frictions, or the application of the ammoniacal liniment, or any other stimulant. Some modern practitioners have recommended a plaster composed of gum elemi alone, or mixed with the oxyde of mercury, in the proportion of half an ounce of the former with thirty grains of the latter. This plaster

is very adhesive, and by its irritating properties favours suppuration; but it sometimes occasions a great deal of pain; hence it should not be employed for some weeks after the patient is accustomed to the bougies, and then sometimes only once every two or three nights.

By these means not only strictures and ulcers in the urethra and obstinate blennorrhœa are cured, but even those diseases seated beyond the reach of the bougies, as the chronic swellings of the testicles, fistulas in the groin, &c., especially when combined, according to circumstances, with the internal use of mercury and the decoction of sarsaparilla.

After having by these means succeeded in removing the disease in the urethra, I must repeat the observation, that the disease is rarely so completely cured, that the occasional use of the bougie can be dispensed with; for the spot where the stricture existed has always a tendency to contract; hence it is advisable that the patient should always have by him an assortment of bougies.

We are sometimes called to patients who have been trying the bougie; in which case we should inquire whether the bougie has passed the obstacle or not; whether it has passed with ease or has required force; in the latter instance, we must inquire whether the surgeon has made any progress by the repeated introduction of the bougie, and whether he has overcome every obstacle in the urethra;* or whether he has passed be-

* I cannot pass unnoticed a very great error committed frequently by those who engage in the use of bougies. I am very often called to patients with stricture in the urethra, to remove which, bougies had been previously used, even for months together. Because they void urine with tolerable ease, they are pronounced cured; but they are much astonished some time after to

yond the stricture without relieving the dysury; for then it is probable that several strictures exist in the urethra, which must be removed in succession; or it is probable that the bougie has forced a new passage, rendering all our present efforts unavailing.

In many cases of this kind it is proper to try the smallest bougies, and in different directions; for sometimes the artificial passage is not in the course of the urethra. If a spasm impede the passage of the bougie, the directions formerly given on that head should be observed. Sometimes the introduction of the bougie is facilitated by gently rubbing the perinæum with one hand, while the other is employed in passing the bougie. To remove the spasm, cold water may be applied to the glans penis. If, when the bougie is passed as far as the stricture, it recoils on being left to itself, it is a certain sign that it has not entered the strictured spot. By altering the form of the point of the bougie, we may be enabled to judge whether it has entered the spot where the obstacle exists.

In some instances, the bougie passes readily one day and not the next; sometimes the bougie is stopped by the mucous follicles in the urethra, or by the prostate;

discover a fresh difficulty in making water; and especially when on passing the bougie five or six inches in the urethra, I discover a stricture, and inform them that they are not thoroughly cured, and that they must undergo the treatment again. Many acknowledged, that the bougies employed for the same disease of which they were supposed to be cured, on the assurances of those under whose care they had been, never passed beyond the first stricture; and that the possibility of others existing, and that the bougie ought to pass beyond, even into the cavity of the bladder, had never been intimated.

here the introduction may be assisted by the finger, at the same time changing the direction of the bougie. What I have formerly observed respecting the catheter, equally applies to the bougie. Sometimes a large one will pass, when a small one has been tried in vain.

During the use of the bougie, the patient should be very moderate in his diet and exercise, and entirely abstain from venery.

What I have observed on the use of bougies, and on the gradual manner of applying them in coarctation of the urethra, equally applies to strictures of the vagina, with which women are sometimes afflicted after ulcers, as likewise to similar strictures in the rectum.

If a blennorrhœa continue after the obstruction has been removed, injections and other means recommended in Chapter III. should be employed.

If on passing the catheter the urine does not flow, we should examine whether the end of the instrument has really entered the cavity of the bladder, or whether the openings are not closed by the mucus and grumous blood contained in the bladder; in this case a diluting injection should be thrown into the bladder. If the passage of the catheter is free, it must be referred, as stated above, to a paralysis of the bladder; it is right, however, to observe, that the urine sometimes does not flow, the secretion from the kidneys being deficient. In this case, benefit will be experienced from remaining in bed, from the use of the warm bath, and from the internal exhibition of large doses of opium; sometimes seven or eight grains of the phosphas calcis stibiatus taken at bedtime, produce the happiest effects. In general, patients labouring under obstructions in the urethra are observed to be uniformly better in summer

than in winter, and when the wind blows from the south or west, than when in the opposite quarters. From this observation, we should be very attentive to keep up the perspiration: for this purpose, I know nothing better than the antimonial powder above-mentioned.

If the obstruction proceeds from a general or partial thickening of the membranes of the urethra, firmer bougies should be employed, and their operation should be aided by mercurial frictions on the outside of the urethra. It often happens in such cases, that the bougie is not only extracted with difficulty in the beginning, but that it is moreover quite dry; this is an unfavourable sign; on the contrary, it augurs well when it is withdrawn covered with mucus, since it proves that the secreting surface of the urethra has recovered its healthy functions.

If the obstruction is of long standing, the coats of the bladder are thickened; sometimes ulcers are caused by the constant irritation; and then the bladder can retain but a very small quantity of urine, which urges the patient to void that fluid very often. The urine is thick, scanty, frequently of a disagreeable smell, and deposits much mucous sediment, or there is a real discharge of pus proceeding from the bladder.

In these cases, while we are endeavouring to destroy the obstruction, the only means of affording ease to the patient are in a mild diet, and the regular administration of opiate glysters: after having restored a free passage in the urethra, time alone sometimes effects an unexpected cure.

Ledran speaks of a patient whose bladder was so diseased as to contain but a very small quantity of urine,

who was cured by a decoction of marsh-mallows, injected night and morning. Mr. Foot, of London, has repeated this plan in many cases with success; the injection should be administered by means of a gum elastic catheter. He observes, that these patients cannot bear the application of the catheter, morning and evening, without causing inflammation in the urethra, or at the neck of the bladder. To obviate this inconvenience, he introduces the catheter in the morning, and withdraws it after making the injection in the evening. In making the injections, he stops the moment the patient complains of pain, which indicates that the fibres of the bladder are sufficiently distended. He allows the injection to remain in the bladder for a quarter of an hour, or a longer or shorter time, according as the patient feels an inclination to discharge the fluid. In the space of a fortnight, the bladder, which in the beginning could only hold about two spoonfuls of the injection, gradually recovered its natural capacity of retention; which may be ascertained by the quantity of injected fluid it can contain without pain. To the decoction of marsh-mallows, he added an equal part of the decoction of barley and the honey of roses; and towards the close, he employed barley water with the vulnerary lotion. In a month's time the patient was cured.

The principal object in all obstructions of the urethra is to destroy them as early as possible, on their first appearance, and to neglect none, though ever so trifling at the time. If these complaints become dangerous, if they give rise to incurable diseases, these misfortunes may be fairly imputed to neglect. We should therefore impress this truth on our patients as soon as we are informed of their case. If any gland of the ure-

thra should be greatly increased, and within reach of the knife, I would recommend the extirpation; for they are seated on the convex part of the urethra. Their resolution is sometimes effected by frictions with the ammoniacal liniment, or with the mercurial ointment. In respect to the enlargement of the prostate, consult the tenth chapter.

In cases of suppression of urine, proceeding from warty or fungous excrescences in the urethra, which I believe are very uncommon, and whose existence it is almost impossible to determine, some old authors have recommended the application of the caustic. This practice, justly forgotten or disused, has been lately revived by J. Hunter, who even directs this method indiscriminately in every case of obstruction; but I think every surgeon who has a regard for the health of his patients, or for his own reputation, will never employ the caustic, when the part to be acted on is out of sight, and when its action will extend to such irritable parts. I need not detail the dangerous consequences to which this practice is liable.

Happily, these excrescences, carnosities or caruncles of the urethra, are less frequent than is believed. Practitioners have been for a long time in the habit of considering every obstruction to the introduction of the bougie or catheter, as an excrescence in the urethra. More accurate observations, particularly of modern anatomists, have demonstrated the fallacy of such hypothesis, and I will not deny that such excrescences do occasionally exist; I am certain they rarely occur. I have not met with a case in my practice, which I could pronounce, as depending on such excrescences or caruncles in the canal of the urethra.

One of the principal circumstances, too often neglected, and to which the greatest attention ought to be paid in every case of dysury, is to direct the patient not to make efforts in expelling the urine, but to allow the bladder the time to contract gradually and completely, which the evacuation of the quantity contained must require. They must be informed, that in forcing or compressing the bladder with the abdominal muscles, in order to hasten the evacuation of urine, they increase the morbid affection of this organ and impede the cure.

In every case of dysury, or of chronic suppression of urine, we must carefully examine whether any tumour is formed behind the stricture. The formation of such circumscribed tumour behind the stricture, is often accompanied by much pain, and violent symptomatic fever till the abscess is formed.

If the tumour is already formed, the patient should be informed, as I had occasion to remark, of the dangerous consequences from an erosion of these parts by the urine, and he should be advised not to defer the operation. If this advice is given too late, and an abscess, or abscesses already exist in the perinæum, through which the urine is discharged, it is often advisable to dilate or lay open these abscesses; light dressings with dry lint or sponge should be applied.

When the dysury is accompanied by a fistula in the perinæum or its vicinity, and the urine is observed to flow partially or entirely through one or more of these fistulous openings, it would be in vain to attempt the cure of the fistula, before the obstruction in the urethra has been destroyed. And when the obstruction no longer remains, the fistula often heals of itself, or only requires occasionally the application of emollient cata-

plasms to the perinæum, and of a little of the red oxide of mercury to the edges of the opening. If the fistula is callous, the callosities must be destroyed by the caustic, or by the operation. Sometimes these fistulas resist all these means, and yield only to a course of mercury.

CHAPTER X.

Of the Enlargement, or Swelling of the Prostate Gland.

THE swelling, or enlargement of the prostate gland is a dreadful disease, but fortunately of rare occurrence. It is surprising that nosologists have not noticed this disease, though they have made a particular genus of the swelling of the parotid glands, which perhaps never is, or but rarely, an idiopathic disease. In the nosological table which I have drawn up in manuscript, I have introduced the genus under the term *prostatitis*, or *prostatocoele* (*tumor prostatae*), and in this genus I have included the different species or varieties of this disease, as *prostatitis inflammatoria*, *scirrhusa*, *cancrosa*, *fungosa*, *varicosa*, *calculosa*, &c.; for the swelling of the prostate may depend on inflammation, abscess or stones formed in its substance, on a varicose enlargement of the vessels, on a general tumefaction and scirrhous induration of this gland. Desault has so ably

treated of these different species of swellings of the prostate, that I shall transcribe what he has written in the second volume of his Surgical Journal. I shall merely add a few practical remarks, tending to mitigate, or more effectually to cure this dreadful disease. I shall begin by observing that the tumour of the prostate, differs from all other glandular swellings in being, from situation, dangerous; in producing retention, and by degrees a total suppression of urine, and at the same time, a remarkable alteration in the structure of the bladder, which always ends in death.

Though the swelling of the prostate in men (for I have never seen the disease in women), is most frequently caused by the suppression of syphilitic blennorrhagia, it may sometimes originate from other causes not hitherto well known. The case of the late Doctor Fothergill, of London, who had never been connected with a woman, and who died of a suppression of urine, occasioned by a fungous tumour of the prostate, is a striking example.

I shall now give the description from Desault, of the symptoms produced by the different causes of the tumefaction of the prostate, and of the method of cure.

When this complaint is produced by an inflammation of the prostate, it appears suddenly, and increases very rapidly. The patient experiences at first, a sense of heat and weight near the perinæum and anus; he soon complains of a constant throbbing pain, which he refers to the neck of the bladder. This pain is increased on his going to stool, or when he attempts to evacuate his fæces; he is affected with tenesmus and frequent desire of voiding his urine; he is troubled with the sensation of a large collection of fæces in the rectum; on passing the finger up the rectum, the projection of the prostate

is perceived in front. If he attempts to make water, it is some time before a drop will pass, and if he strains, a new obstacle presents in the pressure of the swelling of the prostate against the neck of the bladder, thereby closing the passage; and it is only by suspending the effort that he can succeed in voiding his urine. The stream of urine is smaller and the pain in passing it more acute, in proportion to the degree of inflammation in the prostate. We may add as a diagnostic symptom, in this species of retention, that if the introduction of the catheter is attempted, it penetrates freely, and without meeting any obstacle as far as the prostate, where it is stopped, and where the contact is extremely painful. The patient has a frequent hard pulse; is troubled with thirst, and is affected with all the general symptoms of inflammation.

This species of retention, and all those produced by the enlargement of the prostate, or by obstructions in the canal, are in general more dangerous than those proceeding from weakness in the bladder. In the latter, the rupture of this viscus is scarcely to be apprehended. The canal being free, its sides are not so completely in contact, as to prevent their being separated by the urine; which, after filling and distending the bladder, acts by its gravity, aided by the reaction of this viscus, and the action of the abdominal muscles. In such cases of retention, we observe the urine overflows; and the persons live many years in this state without experiencing any alarming inconvenience. This is not the case when the retention depends on a contraction in the canal; for besides the natural resistance of this passage, the urine must overcome the obstacles arising from this contraction; and frequently these obstacles present a greater re-

sistance than the coats of the bladder, which possess only a certain degree of extensibility, beyond which they are ruptured. Moreover, the retention produced by the inflammation of the prostate, is more or less dangerous, according to the violence and obstinacy of this inflammation.

Here the indication is obvious. Resolution being, as in inflammations of other parts, the most favourable termination; to accomplish this, all our means should be directed. The principal remedies to be employed are, bleeding from the arm, the application of leeches to the verge of the anus, the warm bath, emollient glysters, and emollient poultices applied to the perinæum. Cooling drinks, so efficacious in common inflammatory diseases, would prove rather injurious than beneficial in this case; for by increasing the secretion of urine, they would accelerate and aggravate the complaint. Hence, instead of directing the patient to drink plentifully, we should endeavour to allay his thirst by a few slices of orange, or by some quantities of flaxseed or dandelion tea, &c., or some other cooling drink. But, however efficacious these means, they are often too slow in their operation, and the symptoms too urgent for us to wait for the urine's assuming its natural course. The power of the bladder, likewise, is often too much weakened by the excessive distention of its fibres to expel the urine. Recourse must then be had to the catheter; but the stricture of that portion of the urethra which crosses the prostate, renders the introduction of this instrument sometimes very difficult, and always very painful. Greater success generally attends the use of a large, than a small catheter; which may be made either of silver or of gum elastic. The gum elastic catheter, pre-

ferable when it is to remain in the bladder, has the defect of not possessing sufficient solidity, though furnished with an iron stilet, to overcome the resistance of the canal; the silver one possesses this advantage. But whichever catheter be chosen, it will generally pass freely as far as the prostate, where it is checked, not only by the contracted state of the canal, but likewise by the new curvature it has acquired. For the prostate cannot enlarge, without pushing forwards and upwards, or to one side, that portion of the urethra behind which it is situated; a circumstance which must be attended to, in the length and direction given to the point of the catheter, which should be longer, more curved, and be more elevated during the introduction, than in other obstructions of the urethra. Having ascertained, as precisely as possible, that the point of the instrument is in the direction of the urethra, and that the obstacle opposed to its entering the bladder, consists in the constriction of the passage, the catheter may be forcibly pushed on, without the risk of forcing a false passage; for certainly, it will sooner dilate a passage existing in the direction in which it is forced, than force a new passage. We acknowledge, however, that it would be dangerous for young, inexperienced practitioners to adopt this precept: those alone are entitled to sound with boldness, who, uniting an accurate knowledge of the different curvatures of the canal, with the frequent practice of the operation, can determine at a glance the situation and direction of the point of the catheter. For, if at the time we force the instrument, its point be held too low, or be inclined to one side, &c., we shall inevitably form a false passage, by lacerating the membranous part of the urethra; a very serious accident, which must aug-

ment the inflammation of the prostate, and increase the difficulty of introducing the catheter. Rather than expose the patient to this danger, it would perhaps be better to puncture the bladder above the pubis. The observations of Mr. Nöel, recorded in the *Surgical Journal*, in conjunction with many others, prove the advantages of this operation, performed in the hypogastric region. Besides, the inflammation of the prostate is one of the cases in which we may expect the greatest advantages from the operation; for as the inflammation will naturally terminate in a few days, if resolution takes place, the canula need not be retained long in the bladder; and the canal becoming free, if the catheter should be required, the obstacle which opposed its entrance no longer existing, it penetrates with the greatest ease. Notwithstanding the numerous instances of success, the puncture of the bladder must always be considered as a dangerous operation, and should not be performed till after having tried several times to introduce the catheter into the bladder, or having tried whether the presence of a bougie, confined for some hours in the urethra, would not excite the evacuation of urine; a happy event which it has often procured, though it had not overcome the obstacle. Before he undertakes the operation, the surgeon should call in consultation another professional character, especially if one reside in the same place more skilled in passing the catheter. If the consulting surgeon is not more fortunate, the puncture is not to be delayed; but if the catheter has been introduced, and the urine evacuated, should it be withdrawn or retained? Its remaining in the portion of the urethra obstructed by the prostate, will certainly increase the inflammation of this gland; on the other hand, there is

danger of our not being able to introduce it again. There is a difficulty in adopting any general precept. We must decide according to the difficulties experienced in introducing the catheter, and the confidence we have in our own skill, provided this confidence is founded on our uniform success in analagous cases.

When the inflammation of the prostate does not terminate in resolution, suppuration often follows. This suppuration appears not to attack the substance of the gland, but the investing membranes, and the cellular texture connecting the lobes. This at least was observed in several bodies, publicly examined in the theatre at the Hotel Dieu. Although we have seen very extensive collections of pus in this gland, we have never observed it wasted or destroyed by suppuration; on the contrary, we have always observed that it remained entire, and often larger than in the natural state. We have frequently seen its cellular texture inundated with purulent matter; and sometimes we have discovered several small sacs, or follicles filled with pus, situated between the lobes; and when larger collections have been observed, they have always been exterior to the gland, either between it and the bladder, or between it and the rectum.

We know that the retention of urine is maintained by the swelling of the gland in a state of suppuration when the symptoms of inflammation continue beyond the eighth day from the attack; when, after having increased to this period, they appear to subside, and again become more violent; when the fever is accompanied by evening exacerbations, and frequently preceded by rigors;—these symptoms indicate the suppuration of the prostate; but there are none which point out whether

the pus is diffused through the gland, or whether it has formed an abscess, or where this abscess is situated.

The prognosis in this disease is not the same in every case of suppuration. Generally, when the purulent collection is situated in the coverings of the prostate, the prognosis is more favourable than when the whole cellular texture of this gland is macerated in pus, or when several abscesses are formed. In the latter instances, the patients rarely recover. The pus being as it were diffused through the whole gland, cannot find vent, and the want of positive signs, indicating this condition, do not permit an incision to be made into the prostate for evacuating the pus. Besides, it is very doubtful whether any advantage would be derived from this incision; at most it would only favour the discharge of the matter in its neighbourhood, and would contribute little to the evacuation of that which is more distant. The gland can only be relieved by the absorption of the pus, and nature seldom accomplishes this. This is not the case when there is a single abscess situated in the cellular membrane covering the prostate; if situated between the gland and the neck of the bladder, it often opens into this viscus spontaneously, or it may be opened with the point of the catheter. The pus being discharged by means of the instrument or expelled with the urine, it presents no farther obstacle to the cleansing and cicatrization of the sac which contained it. If the abscess is seated near the rectum and perinæum, and its existence and situation can be clearly ascertained by the touch, a free opening will expedite the cure.

The indications are therefore not the same in the different cases; but in all the catheter is required, and is sometimes indispensable, for the evacuation of the

urine; and as it should remain in the bladder for some time, the gum elastic one is preferable to one made of silver. It must be introduced agreeably to the instructions given under the article of inflammation of the prostate.

When the abscess points in the urethra, or at the neck of the bladder, it is often opened by the introduction of the catheter, the end of which is entangled in the sac containing the pus. We are apprized of this by the discharge of a greater or less quantity of this fluid without any admixture of urine. In this case we must wait till no more pus is discharged by the catheter, when the instrument should be withdrawn a few lines to disengage it from this false passage; it should be again pushed forward, taking care to raise the point, so that it may not take the former route but pass into the bladder. When the abscess bursts, the pus is mixed with the urine, and discharged with the latter fluid. Whether the opening is in the urethra, or in the cavity of the bladder, it will be prudent to allow the catheter to remain, and to continue the use till the urine is free from pus. In the first case, it is necessary to prevent the urine getting into the cavity of the abscess, which would impede its consolidation, and might form calculous concretions: in the second case, it is of use in throwing light detersive injections into the bladder. These injections should be employed twice a-day, frequently repeating them at the time; allowing the first to be discharged which are intended to dilute the pus and wash out the bladder as well as the abscess; but retaining the last, in order to blunt the acrimony of the urine; and render it less irritating. For this purpose we gene-

rally employ weak barley-water, and we prescribe mild diuretic liquors.

The retention of urine produced by calculous concretions formed in the prostate, have not escaped the pathological enquiries of the celebrated Morgagni. He frequently found these stones in the dead body; and he cites a great number of similar observations made by his predecessors. These foreign bodies present great variety in their number, situation, size, figure, and internal structure. Sometimes several calculi have been discovered in the same gland. In some subjects they were contained in cavities or deep sinuses in the prostate; in others they appeared at the opening and through the whole length of the excretory ducts. Some have been found not larger than millet seed, others the size of a large cherry; sometimes round and polished, at other times oblong and rough. Some were composed of a substance resembling tufa, and were found in the centre of the gland; others appeared to be inspissated semen, and were seated in the excretory ducts: but the greater part were of the nature of urinary calculi, lodged in the sinuses noticed above. The formation of these is always owing to a rupture of the urethra or bladder, the consequence of former abscesses and retentions of urine, for which the patients had not worn the catheter a sufficient length of time. The urine passing through this opening, is effused into the cavity of the abscess, or is lodged in the *cells* of the prostate, and by its decomposition, or by simple precipitation, deposits the elements of these concretions. These calculi occur after the lateral operation for lithotomy, when the wound has closed before it had healed internally; whence there results an internal fistula, where the urine stagnating

forms saline earthy (uric) concretions, which, by the addition of successive layers, are susceptible of great increase.

The existence of calculous concretions in the prostate, is not indicated by any pathognomonic signs. Retention of urine, and obstruction to the ejaculation of the semen, are symptoms common to many other affections of the prostate and of the urethra. By the finger introduced per anum, we may discover the increased volume of the gland, but cannot detect the nature nor cause of this increased bulk. When the stone, embedded in the prostate, presents a naked surface in the urethra, the striking of the catheter against this concretion proves the existence of a foreign body, but still leaves considerable doubt as to its situation; we have still to determine whether it is lodged in the bladder or prostate. For, supposing the catheter is stopped by the projecting portion of a stone encysted in the prostate, we may doubt whether we do not touch a stone in the bladder protruding into the urethra; and upon the supposition that the catheter instead of being stopped, slips over the uncovered surface of a stone, it is equally doubtful whether this is lodged in the bladder, near the neck of that viscus, or in the prostate.

But this uncertainty in the diagnosis, presents none in the indication of cure. For whether the stone is lodged in the prostate or in the bladder, or is engaged in the neck of that viscus, we should endeavour to extract it, and the same operation is equally adapted to either case. The operation consists in an incision through the perinæum into the prostate, as practised in the lateral operation of lithotomy. If the stone is lodged in the bladder, this incision will render the extraction easy. If the foreign

body is encysted in the prostate, this incision is alone suited for disengaging and extracting it. It is true, that the wound may not correspond to the situation of the stone in the prostate; but in this case, after ascertaining its real situation by the finger passed into the wound, with the point of the bistoury we may divide the kind of partition comprehended between the incision and the cyst of the stone, loosen it, and extract it with ease.

A more frequent cause of the tumefaction of the prostate, is the varicose enlargement of its vessels, and of those distributed to the cellular membrane uniting it to the neck of the bladder, and to the beginning of the urethra. We learn from dissection, that these vessels form a plexus, very visible even in the natural state, without the aid of injection. This vascular plexus is susceptible of considerable dilatation, and frequently it presents knotted projections in the neck of the bladder, resembling the varices in the other parts of the body. In this disease the prostate increases less in volume proportionably than its covering. Their texture is sometimes soft and spongy, sometimes firm and hard, according as the swelling is recent or of long standing: finally, this varicose enlargement of the prostate presents the same varieties as the hemorrhoidal tumours, with which it has a strong analogy, and with which it is frequently complicated. Both these preternatural states are as frequently the effect as the cause of the retention of urine and of constipation; nothing contributes so much to their production as the efforts made by the patient in voiding urine and in going to stool. The violent contractions of the abdominal muscles, by forcibly compressing the viscera contained in the pelvis, and thus preventing the ready return of the blood by

the iliac and mesenteric veins, produces a stagnation of the blood in the veins of the perinæum, and as a necessary consequence, the engorgement of all the viscera in this region. Hence, in this case, the varicose enlargement of the prostate is a consequence of the retention of urine, which it keeps up. Frequently the tumefaction of this gland is prior to the retention of urine, of which it is the original cause. This state is not uncommon in old men, and even in young men addicted to excess in venery, or who have made too free with spiritous liquors. It is likewise very frequent in persons who have had repeated claps, and in those who have hæmorrhoidal tumours, complicated with obstructions in the abdomen.

That the retention of urine depends on the varicose state of the prostate, may be ascertained, 1st. By the existence of the common symptoms of tumefaction of the gland. 2d. By the slowness with which the retention comes on, preceded commonly by a difficulty in making water; whose gradual increase has been marked by paroxysms, more or less evident, whenever the patient has ridden on horseback or in a carriage, or taken exercise, or has taken heating liquors or food. 3d. By the indolent condition or little sensibility of the tumour formed by the prostate, which may be ascertained by compression with the finger introduced into the rectum. 4th. By the want of scalding when the urine passes along the canal, and of the symptoms peculiar to the other enlargements of the prostate, and by the presence of some of the predisposing causes which have been enumerated.

When the retention of urine is complete, the fluid should be immediately evacuated by the introduction of

the catheter; but this operation is not always easy even in the most skilful hands. The directions given in the case of inflammation of the prostate, will likewise apply here. It is especially in the varicose enlargement of the gland that the large catheters are to be preferred, and the gum elastic to the common catheters, as being attended with less inconvenience when they are to remain in the bladder.

When the catheter is stopped by the stricture of that portion of the urethra embraced by the prostate, instead of withdrawing it to make fresh attempts, it is better, when we are certain that the point of the instrument is in the axis of the canal, to apply it with force against the obstacle, and to retain it in this position. The pressure of the point of the catheter against the tumid sides of the urethra squeezes out the fluid with which they are choked, and allows the instrument to pass farther on a second attempt. By proceeding thus, we shall succeed sooner or later in introducing it into the bladder. For this purpose, catgut bougies have been employed. Having introduced one of these bougies as far as the strictured portion of the canal, it should be fastened in the manner already explained. Enlarged by the moisture of the urethra, it separates and compresses the sides of the canal, and allows another bougie to enter further. Before Desault had acquired that great dexterity in passing the catheter which now enables him to overcome with safety every obstacle of this kind, he successfully employed bougies made of catgut. But they have the inconvenience, 1st, Of acting too slowly, especially when the symptoms from retention of urine are very urgent. 2d, Of being too stiff when introduced; of not readily accommodating themselves to the dif-

ferent curvatures of the urethra which sometimes renders their introduction painful: 3d, Of not serving a second time: 4th, Of requiring to be withdrawn and renewed every time the patient desires to make water, which makes it necessary to use a great number of these bougies, and calls for great assiduity on the part of the surgeon.

Sometimes the catheter, striking against some of the dilated vessels in the urethra, ruptures them, and occasions a greater or less discharge of blood. This accident, far from being injurious, is often beneficial; it is a topical bleeding, which removes the fulness of these vessels, and facilitates the passage of the catheter. When this bleeding from the urethra does not occur, and we cannot succeed in introducing the catheter, leeches should be applied to the perinæum, or the vessels may be emptied by one or two bleedings from the arm. These means, though not as efficacious as if the blood had been taken immediately from the part, have been employed, however, with success.

Having evacuated the urine by means of the catheter, the instrument should be retained in the bladder. Its presence in the urethra is necessary to dissipate the congestion in the prostate, and in that portion of the canal embraced by the gland. Its use should be continued for a length of time, cleaning it every eight or ten days (I am of opinion every two or three days would be still better), and replacing it by a new one whenever it is injured or incrustated with uric concretions. A perfect cure cannot be expected under six weeks or two months, and we must not forget that the complaint is liable to return; to prevent which it will be prudent not to leave off the use of the catheter

suddenly, and to direct the patients to wear it for some time during the night, even after they appear to be cured.

When we reflect on the analogy which exists between the varicose enlargement of the prostate, and the varicose state of the veins of the leg, we perceive that the same principles apply to this treatment. And experience has proved that the latter cannot be cured without a justly adapted and long continued pressure, and the catheters act partly by the same mechanism. This comparison led to the use of leaden bougies. It was supposed that being harder they would compress more forcibly, and that their effects would be more expeditious and certain. But these bougies will not like the gum elastic catheters, afford a free passage to the urine; they have not sufficient firmness to overcome the obstacles in the canal, and though flexible, they are too hard to be moulded to the curvatures of the urethra. Besides, there is danger, by pressing too much on some parts of the canal, of their producing sloughs, which would run into gangrene. Besides, it is not on the pressure alone, that the success of the catheters depends; their remaining in the canal produces in it and the prostate an irritation which tends greatly to relieve their fulness. Indeed this slight inflammation is soon followed by a puriform discharge, more or less abundant, whence proceeds a subsidence and obliteration of these vessels and the dilated cells; at the same time, the catheter, distending the urethra during this operation of nature, preserves the freedom of the passage. This explanation is offered as an hypothesis not altogether unfounded or without probability.

The enlargement and scirrhus induration of the prostate is another disease very common in old men, and in those who have repeated claps. It is not always however, the consequence of venereal poison; it may be produced by herpes and psora, and sometimes it is the concealed effect of a scrofulous habit. The size and hardness of this gland varies greatly, according to the duration of the swelling. Sometimes it is as hard as cartilage, more frequently its texture resembles the rind of bacon, and appears filled with thickened lymph. Sometimes it has been found twice or thrice its natural size. J. L. Petit mentions his having seen it as large as his fist. Sometimes only a portion of the gland was observed to be scirrhus; at other times the whole gland has been affected with the same induration.

The diagnosis in this disease is drawn from the common symptoms of swelling of the prostate, combined with the remote and immediate causes of the disease. By introducing the finger per anum, the hardness of this gland may be discovered, and this examination is not painful.

When the swelling is recent, and proceeding from syphilis, the prognosis is more favourable than when the disease is combined with scrofula, or depends upon any other humoral cause, difficult to eradicate. When the gland possesses the hardness of cartilage, its organization is destroyed, and the cure is hopeless.

The retention of urine being a common symptom of scirrhus of the prostate, the introduction of the catheter is here likewise necessary, and this operation is often attended with more difficulty, than in the other kinds of enlargement of the prostate. The hardness of the gland, not allowing it in this instance to yield to pressure,

catheters of a small diameter succeed the best: it often happens, that considerable force being required to separate the sides of the canal, and the stilets with which the catheters made of gum elastic are furnished not possessing sufficient strength, the surgeon is obliged to use a silver catheter of the size used for children. Sometimes even, notwithstanding the smallness of the catheter, it will not penetrate unless it is turned like a gimblet in the canal of the urethra; but in doing this it is highly essential, that we always bear in mind the direction of the canal, with which the point of the catheter should always correspond. When the instrument has penetrated the bladder, it is to be fixed by two pieces of tape to the rings in the handle, and passed under the thighs, to be tied to a band going round the waist, one to the right, the other to the left. No strings need be employed to draw the catheter forward, for it is only in this direction that it can pass out of the bladder. After the silver catheter has been worn two or three days, the canal will commonly admit of a gum elastic one to be introduced in its stead. This is introduced with greater facility if furnished with a stilet. It is to be fastened by cotton thread tied round the penis behind the glans. This instrument is to be left in for two or three days, when it is to be replaced by a larger one, and so on progressively till the canal is restored to its natural dimensions. Lastly, the catheter is to be employed till the suppuration from the urethra is dried up, and when we feel by the finger introduced in the rectum that the prostate is reduced to its natural size, which seldom occurs before the thirtieth or fortieth day of the treatment, and sometimes later. At the same time deobstruents are to be employed according to the

cause of the complaints, as the antisyphilitic, antiscrofulous, antiherpetic.

We have not mentioned the bougies pretended to be discutient, and proposed for this kind of swelling.

1. Because we consider them as useless and unavailing.
2. Because we allotted to them a separate article, in which we have compared them with the gum elastic catheter.

When the swelling of the prostate follows an ill-treated blennorrhagia, or a suppression of this discharge, we must first endeavour to restore the running by all the means recommended in the preceding chapters, and if they are unsuccessful, by the inoculation of blennorrhagia.

The disease of the prostate is often accompanied by fistula, opening in perinæo before the gland, though the source of the fistula is behind this spot.

If the disease is recent and the patient young, mercurial frictions may be applied with advantage to the perinæum, and the inside of the thighs; or we may have recourse to a seton, or to repeated blisters in the perinæum, without omitting the bougie, and the internal use of cicuta in large doses. When the disease is inveterate, and the gland has become scirrhus, or has formed a fungous excrescence, as happened in the case of Dr. Fothergill, the disease generally proves fatal, especially in old people.

In the chronic swellings of this gland, a decoction of the root of the *daphne mesereum* has been recommended to be given internally, using at the same time bougies dipped in oil, and a little of the oil of turpentine applied externally, in conjunction with sea-bathing. I am not aware that success has ever attended the use of these remedies. Opiate glysters are the best palliative in

this disease; but they are frequently injurious by inducing constipation; in such cases, the extract of henbane, given occasionally either by the mouth or in the form of enema, is preferable. The cicuta given in large doses, and continued for a length of time, has been known to afford great relief.

CHAPTER XI.

Of Syphilitic Ulcers, and Fistulæ of the Genital Organs.

THE name of shanker was first applied to ulcers arising on the organs of both sexes, probably from their resemblance to the corroding ulcer called cancer.

Most modern authors and practitioners confound under the appellation of shanker, all the ulcers occurring to the genital organs, or the neighbouring parts. Some apply the term likewise to the aphtha and ulcers in the mouth; others extend the term to all ulcers, in whatever part of the body they appear, if they proceed from the syphilitic virus infecting the system; and lastly, others give the name of shankers to the ulcers of the genital organs, and to those occurring in other parts of the body, but only when they proceed from a primary syphilitic infection; and they give the name of venereal ulcers to all those affecting any part of the body, if they are the consequence of a general taint, or where the syphilitic virus is diffused through the system.

The term shanker being therefore of very vague signification, and likely to lead to error, I shall not employ it in this treatise. I am likewise of opinion, that the term venereal is not suited to characterize these ulcers; having already endeavoured to impress on the minds of my readers this doctrine, that ulcers may affect the genital organs after venereal intercourse, without their proceeding from the specific virus, properly termed syphilitic. This distinction is highly important, though generally neglected in practice.

I think the reasons which have induced me to change the ancient nomenclature, in different parts of this treatise, will occur to such of my readers as are in the habit of reflecting.

The most usual way in which the syphilitic virus is communicated being the connection between the sexes, syphilitic ulcers appear first on the surface of the most irritable parts which have been in contact; hence they are generally observed on the internal surface of the prepuce, at the corona glandis, on the frænum, on the glans itself in men, less frequently on the external surface of the prepuce, on the skin of the penis, scrotum or thighs, &c.; and in women, on the internal or external surface of the labia pudendi, on the clitoris, on the nymphæ, in the vagina, on the thighs, &c.

The syphilitic virus acts (at least at the present time in Europe) on a healthy person, only when the infectious fluid has been applied to some part, and when it remains a certain time for it to act. On whatever part of the surface of the body this fluid be applied, it will produce an ulcer; but it may be conceived that it will act more readily and more rapidly in proportion as the part is more irritable, as the fluid is less likely to be

removed, and as the mucus secreted by the part is disposed to retain it, without being, however, sufficiently abundant to produce blennorrhagia.

We very frequently observe, likewise, that syphilitic ulcers affect the red, moist, or secreting surfaces of the body, while we rarely see them on the white or dry surface of the skin, and seldom on those secreting a very great quantity of mucus; for this mucus, by diluting the virus, obtunds its acrimony, and defends the parts from its corrosive power. What I have said is applicable not only to syphilitic ulcers, proceeding from a primary or original infection, but also to ulcers affecting the genital organs, the throat, mouth, and surface of the body, from a secondary infection, or, as it is commonly termed, a general infection of the system.

This distinction between primary and secondary ulcers, or, as some authors term them, local and general ulcers, is of great importance in practice; for recent syphilitic ulcers of the first kind may be often cured by topical applications alone; or at least they only require a combination of these means with small doses of mercury; while those of the second species cannot be radically cured without a course of mercury.

I have already stated, that primary syphilitic ulcers appear commonly on the frænum, or at the side of the frænum, behind or on the corona glandis, or on the internal surface of the prepuce; that they are less common on the glans, and still more rare on the surface of the penis or scrotum, &c. I remarked, in the chapter on blennorrhagia, that the syphilitic virus lodged behind the corona glandis, sometimes produced an inflammation and running from the sebaceous glands situated

behind this part; that this running was most commonly without ulceration. I termed this disease blennorrhagia balani (vulgo gonorrhœa spuria). If the internal surface of the prepuce become the seat of the virus, it thickens, swells, and becomes hard, and ulcers arise, sometimes accompanied by phymosis, or paraphymosis.

It is not by the external characters alone that we can discover the nature, and distinguish the different kinds of ulcers alluded to; to the inspection and practical knowledge, we must join a profound acquaintance with the diseases, an attentive examination into the actual state of the patient, his constitution, and the remedies and regimen which he has adopted. The following appearances may, however, assist our judgment.

Syphilitic ulcers are generally known by their hard callous edges, by the soft white crust or skin covering their bottom, by the more intense redness of the surrounding skin, by their constant tendency to corrode and enlarge, and by their not healing without the assistance of medicine. But the symptom which constitutes the specific character of syphilitic ulcers, is a certain thickening or a kind of hardness in the affected parts, which uniformly attends them. Moreover, the judgment formed from these appearances will be strengthened, if the patient is aware and acknowledges that he has been previously exposed to the infection.

The diagnostic symptoms by which the non-syphilitic ulcers are distinguished from the syphilitic, are,

1st. The difference of appearance.

2d. They remain stationary, without corroding or destroying the neighbouring parts; or if of a corrosive nature, they extend more in depth, whilst syphilitic ulcers generally spread more.

3d. They frequently disappear of themselves, without the aid of medicine.

4th. They appear only during the use of mercury.

5th. They grow worse under the use of mercury, whether internally or externally administered.

6th. They have been previously treated by mercury without success.

7th. They possess exquisite sensibility.

8th. The atonic state of the body generally, or the relaxation, and flacidity of the affected parts, whence there is an ichorous discharge.

9th. The symptoms indicating the existence of other diseases, as scurvy, lepra, herpes, scrofula, and other acrimony in the blood, whether alone or combined with syphilis.

It has been supposed that syphilitic ulcers on the dry or white surface of the skin, gives rise more readily to an absorption of the virus, than the same ulcers when they affect the moist and red surface.* I have, at least, constantly observed, that the virus always produces more violent symptoms, and greater destruction when the absorption takes place from ulcers of the former kind.

The time required for the virus to produce syphilitic ulcers, depends not only on the particular structure of the parts, and on the health and constitution of the pa-

* By the dry or white surface of the skin, I understand the greater part of the integuments covered by the dry and scaly epidermis; and by moist and red surface, that which has no epidermis, but only a thin transparent pellicle (epitheleum) which exhibits the colour of the blood, and is always moist, as the lips, vulva, the glans penis, the canal of the urethra and all the openings where the epidermis is reflected internally.

tient, but likewise perhaps on the quantity of the virus; though this proposition has been denied by most modern writers. Indeed, when we compare with attention the very remarkable difference in the violence and rapidity of the effects produced by the syphilitic virus on healthy strong constitutions, when it first appeared in Europe, with the effects produced at the present time, and especially if we take into view the ravages which the same virus occasions at present among nations where it was absolutely unknown, as we have lately seen in Canada (see chapter XXV.) and in the different islands of the Pacific Ocean, we cannot doubt that the greater or less violence of the symptoms of syphilis may depend, at least sometimes, on the more or less acrid quality of the virus.

Syphilitic ulcers generally appear on the red and moist surface of the genital organs, on the third or fourth day after an impure connection. I have, however, seen cases when it appeared in twelve hours, and others when it did not appear for seven or eight days after; while those which occur on the dry surface of the body seldom appear under twenty or thirty days. In the first instance, the disease generally begins with an itching, and with little pustules, or transparent vesicles filled with a limpid fluid, which on this account some writers have termed crystalline. The pellicle covering these pustules breaks or is destroyed by rubbing, and one or more ulcers appear, whose base is covered with a lardaceous mucus, or crust, and extend less in depth than in breadth. In the second instance, on the contrary, when a primary syphilitic ulcer is formed on the body of the penis, on the scrotum, or on the skin covered with dry epidermis, there is a round circular red and hard

pustule, which inflames but slowly, and when it ulcerates, discharges a clear ichorous matter.

There are other obstinate, malignant and corroding ulcers, sometimes affecting the genital organs of both sexes, which must not be confounded with syphilitic, for they require a very different mode of treatment. Several species of these ulcers were well known to the ancients, and particularly described by Celsus, under the title of phagedenic ulcers of the penis. The nature of these ulcers is very different from syphilitic ulcers, and they are very liable to erode and destroy the glans, the urethra, and the corpora cavernosa. I think I have observed these ulcers in the beginning seated in the sebaceous glands of the corona glandis, and though perhaps sometimes originally syphilitic, they are often of a truly cancerous nature, and consequently require a treatment very different from common syphilitic ulcers.

Another species of ulcer, likewise known to the ancients, attacks sometimes the glans penis, and very quickly produces mortification of this part. Its nature appears to have nothing in common with the syphilitic virus, though the latter sometimes produces the same effect.

It is necessary to repeat, that in reading the ancient Greek and Latin authors, we must bear in mind that they in general apply the term cancer to what we call gangrene or mortification, and that they gave the appellation of carcinoma to the disease we term cancer.

But it is not the organs of generation alone which are subject to primary syphilitic ulcers. Every other part of the body may become the seat of the ulcers, when such part has been exposed to the immediate contact of a syphilitic ulcer, or to the matter impregnated with

this virus. The different parts of a healthy body, especially the hands and the fingers, are much more liable to be violently attacked when there is an abrasion, scratch, chop, or wound of any kind.

I know a very remarkable instance of such infection. A man having cut his finger with a pen-knife, exposed himself that night to the infection, without apprehending any serious consequence. The wound in two days turned to a very malignant syphilitic ulcer, accompanied by a hard and obstinate swelling of the arm, and by a bubo in the axilla, followed by symptoms of a general infection.

Physicians, surgeons, and accoucheurs are the most subject to this kind of infection, and they cannot be too careful in washing their hands after touching patients, especially those who may be infected. I likewise enjoin on all my patients, whose genital organs are affected with any syphilitic disease, the greatest cleanliness; for though an opposite opinion has been lately maintained, it has always appeared to me probable, that the syphilitic fluid of any infected part was dangerous to the patient himself, when applied to any other part of his body.

I have certainly seen many unfortunate examples of practitioners, especially accoucheurs, who having accidentally their hands wounded, or neglecting to wash them carefully, have been affected with syphilitic ulcers in the hand or arm. The effects of the virus applied in this manner have always been more violent and more obstinate, than when the red surface of the genital organs has been the seat of the disease. I am acquainted with a midwife, who having been infected in this manner some years ago, suffers to this day from this unfor-

tunate infection. An accoucheur who delivered an infected woman in London in 1779, had a real bubo or swelling of the lymphatic gland, situated on the inside of the arm, and an enlargement of the axillary glands, accompanied by the most violent and obstinate symptoms. Dr. M'Cauley, an eminent accoucheur, likewise suffered greatly from a similar infection; and though the most efficacious means were employed, he is not yet cured, after many years of suffering.

Although I have examined, with the most scrupulous attention, every case of this kind, I have never been able to discover in the constitution of the patients any particular cause, which could give rise to such violent symptoms. In two instances, the patients before and afterwards had syphilitic ulcers on the red parts of the body, and the virus then produced only the usual symptoms. It appears to me therefore probable, that to excite primary syphilitic ulcers on the parts covered with epidermis, or on the white and dry surface of the body, the virus must be extremely acrid in its nature; or that it produces more violent effects because it is applied to a surface covered with epidermis, where there is no mucus or fluid to dilute it, or to defend the parts against its acrimony. At least we rarely observe that the primary syphilitic ulcers, which are situated on the moist and red surfaces, and even the secondary syphilitic ulcers which arise on any part of the surface of the body, are accompanied by such violent and obstinate symptoms.

Women are equally subject to syphilitic ulcers on the genital organs; but when they are attacked, the consequences are rarely so dangerous as in men. Their

more sober manner of living, the less degree of irritability, and the different structure of their external organs of generation, the great humidity of these parts, which renders them more liable to blennorrhagia, prevent the rapid and violent progress of syphilitic ulcers. Sometimes, however, I have seen, especially in hospitals, these ulcers running into mortification, when a fever or other complaint has supervened.

In women these ulcers are situated on the labia externa, the rapha, and the nymphæ; more rarely in the vagina or uterus.

The common run of practitioners, as I have already remarked, consider every ulcer affecting the genital organs as syphilitic. It is generally on the most superficial examination that they pronounce thus on their nature, and that they treat them as syphilitic. I remarked, in the first chapter, that the same error frequently prevailed in regard to blennorrhagia; but with this difference, that the mistake committed in respect to the ulcers may lead to the most serious consequences; for the nature of the ulcer being badly understood, necessarily leads to an improper treatment, and thus often occasions the destruction of the genital organs, and sometimes even the death of the patient. We may, however, be easily convinced, that in our days, as in the time of Celsus, there exist ulcers of the genital organs in both sexes, proceeding from copulation, and communicated by infection, which are not syphilitic, but which arise from an acrimony or poison of a very different nature. Without pretending to ascertain the nature or quality of the various acrimonies which affect the blood in different diseases, at least we know the fact;—we often

see the acrid humours in the blood thrown on the surface of the body, producing a great variety of cutaneous diseases. No enlightened physician would seriously ascribe all these diseases to a single cause or acrimony; is it not therefore surprising, that practitioners in general should pronounce so hastily on the nature of all ulcers attacking the genital organs? Are the genital organs in both sexes exempt from such collection of humours? Every day we see some very virtuous women who are subject to discharges from the uterus or vagina, and in many instances these discharges are so acrimonious as to excoriate the thighs of the patient. Some years ago I was consulted by a woman having a discharge from the vagina, with symptoms which many practitioners whom she consulted pronounced to be cancerous. The patient certainly had no symptoms of syphilis; the surgeon, however, who examined her at the time, having neglected to wash his hands, had one of his fingers attacked with a most obstinate ulcer, which lasted many months. I am acquainted with several surgeons, who having imprudently touched the herpetic ulcers in their patients, have had their fingers ulcerated. Can an unprejudiced physician believe that the genital organs of a man cohabiting with such a woman can be secured against the infection, because the discharge is not syphilitic? Modern chemistry will undoubtedly throw some light on the hitherto unknown nature of these acrimonies. I shall remark, by the by, that the matter constituting the discharge in many diseases of women, changes the vegetable blue to red, and exhibits evident marks of acidity. Can this acrid matter exert less action on being applied to the genital organs of a man; and can we pronounce that a person

having ulcers and excoriations produced by this cause, is attacked with syphilitic ulcers? Certainly not. The same causes and the same acrimonies which produce different kinds of blennorrhagia, when applied to the cavity of the urethra, may likewise produce different ulcers, when applied to the surface of the genital organs.

If these ulcers are called venereal because they follow an impure connection, it must be allowed that this is not the usual acceptation of the term, and that the ulcers are essentially different from those which arise from the syphilitic virus.

In several authors, the ulcers, pustules, and herpes affecting the genital organs, were very accurately described before syphilis appeared in Europe. According to the observations of these writers, these diseases were frequently communicated by coition; they do not, however, appear to have been syphilitic; for they were cured without mercury, and they were not accompanied by the symptoms produced by the syphilitic virus when carried into the system, and which characterizes the disease which we have termed syphilis. Do we not often observe ulcers on the genital organs, which continue for several weeks, and even months, without producing buboes or other symptoms of a general infection, precisely like what happened prior to the appearance of the syphilitic disease? Do we not every day see ulcers of these parts, which, instead of yielding to mercury, are evidently rendered worse by its use? Lastly, can we always pronounce an ulcer to be syphilitic, because it disappears during the use of mercury?

What I have just observed concerning ulcers of the genital organs in both sexes, is equally applicable to

ulcers of the mouth, throat, tongue, &c. I have seen these ulcers terminate in gangrene and death, because their nature was misunderstood, and they were treated as venereal; and what I have said of recent ulcers of the genital organs, and of other parts of the body, equally applies to old ulcers, which, though really syphilitic in the beginning, assume during a course of mercury a different appearance, and in the end bore entirely their syphilitic character. Instead of cicatrizing, as they appeared ready to do, they begin to discharge a clear ichor; they become painful, extremely irritable and corroding, and if the practitioner imprudently insists on the use of mercury, he exposes the patient to the loss of the affected organ, and often to death.

I shall now offer some examples in illustration of the doctrine I have advanced.

A gentleman, twenty-one years of age, of a strong plethoric constitution, consulted me some time ago, about a shanker, as he called it, on the glans penis, with which he had been afflicted these eight or nine months past. He had consulted, at the time he got it first, an eminent surgeon in Dublin, who prescribed a course of mercurials, which produced a salivation. But the ulcer not healing mercurial fumigations were applied for some time to the part affected, by which the ulcer seemed to grow less, and had assumed a better appearance, but had not healed. He was therefore advised to a second mercurial course, with a different preparation of mercury internally as well as externally; but under this course, the ulcers instead of healing, grew from day to day larger, deeper, and in every respect worse. In that condition he came to London, and consulted me. Upon examining the part affected, I

found a large deep ulcer on the glans, with hard and prominent borders, extremely sensible to the least touch. Its basis appeared reddish and pretty clean, but the discharge seemed to be of an acrid corrosive nature; by which, indeed, half the glans was already consumed. I told him that I had seen several ulcers of this kind before; that it was not of a venereal nature; and that mercury, according to my observation, was, in that kind of ulcers, the most unfit remedy; that I would undertake to cure him, but that the cure would require at least two or three months time: upon which he left me, promising he would call the next day, and put himself under my care. He did not; and I heard no more of him till four months after, when he sent for me. At the time I saw him first, his complexion had been lively and fresh; but was now of such a sickly and cachectic appearance, that I hardly knew him. His account was shortly as follows: that, having been dissatisfied with my first opinion of his case, and with the advice I gave him, he, at the desire of a friend, had thought proper to consult an eminent surgeon in town; who, after a close examination, had pronounced his ulcer to be venereal, and had assured him that nothing but mercury could cure him; adding, that he had not taken enough of mercury, nor the preparation which was deemed the best in those cases; and that far from two or three months required for curing him, his prescription would effect a radical cure in three or four weeks time. That on these assurances, he had immediately submitted to this new mercurial course, which brought on a general salivation; but with so little effect, that though the ulcer seemed to grow remarkably better during the first three or four weeks, it afterwards,

instead of healing, had corroded the rest of the glans, with part of the urethra. Whereupon another surgeon was called in consultation, who advised the amputation of the parts affected; but the former refusing, and the latter not being willing to perform it, he had resolved to drop their advice altogether, and to hear mine once more. On examination, I found the remaining portion of the penis swelled to a monstrous size, the prepuce forming a perfect phymosis over the extremity, and the urine discharging through three or four different holes. I advised him therefore to have the prepuce slit up, in order to see the state of the ulceration, and to clean the ulcer, or to apply such remedies as should be thought proper. Internally I prescribed for him some strengthening medicines. He used these latter for eight or ten days; but the operation he put off from day to day; when he was advised by one of his friends to consult another physician, who, by means of a decoction of hemlock and gensing root, promised to do something more for him, than hitherto had been done. This decoction he took for a short time, with very little effect; the corrosion creeping on further and further. At last another physician, an acquaintance of mine, was consulted, who insisted upon the same course of strengthening medicines which I had formerly prescribed; recommending, at the same time, a nourishing diet, the enjoyment of country air, and bathing in the sea, by which means this young man is re-established, with the loss of more than half of his penis, which, had he followed the advice I gave him when he first consulted me, would have been without doubt wholly preserved.

The following observations occur to me on this case, I think it extremely improper to administer a course of

mercurials for a local venereal ulcer; which was the case of this gentleman, when he first applied to the surgeon at Dublin. A second course and salivation, with mercurial fumigations, were still more improper. Advising him a third course of mercurials, after the two former were found useless, was not only very injudicious, but extremely hurtful, because it rendered him forever incapable of propagation, to the great sorrow of his family. The prescription of strengthening medicines, given to him by the last physician whom he consulted, with a nourishing diet, country air, and sea-bathing, was the most judicious, and the only one to save his life, which was at the time in the most imminent danger. And I am firmly persuaded, that the patient, who was forced to follow this latter advice only by the sense of his sufferings, would never have experienced any of all his miseries, had he followed my advice in the beginning. I was consulted in another case, where ulcers in the throat, arising during a mercurial course, being taken for venereal ones, and treated accordingly, by the continued internal use of mercury, became so bad, that both the tonsils, together with the velum pendulum, were almost entirely consumed, and the patient reduced to a most miserable situation; when, by only leaving off the mercury, and using strengthening medicines and diet, he recovered.

Brambilla gives the history of a patient, who under a course of mercury being affected with ulcers of the fauces, which having been mistaken by the surgeon for venereal ones, not only lost his velum by the continued use of mercury, but had a caries maxillæ brought on, which proved fatal to him. The same author also observes, that inflammatory tumours, or ulcers, growing

gangrenous, are constantly rendered worse by the internal or external use of mercury, though they had evidently been originally venereal. I myself have seen many instances, where patients affected with syphilitic ulcers, united with a scorbutic habit of body, by the imprudent use of mercury, were not only reduced to a most wretched condition, but even brought to death.

Fabre, in the supplement to his *Observations on the Venereal Disease*, relates likewise several cases, where ulcers, though evidently arising from a venereal cause, by a long continued use of internal and external mercurials, and repeated salivations, were not only cured, but brought to a state, which afterwards yielding to no other medicines whatever, proved fatal to the patient.

The foregoing cases fully confirm the observations which I have made on this interesting subject. Hence it is of the greatest consequence in practice, that we should bestow the greatest attention in distinguishing,

1. Primary or local ulcers, on the dry or moist surface, caused by the immediate contact of the syphilitic virus from secondary or constitutional ulcers arising from an infected system.

2. Ulcers or shankers proceeding from the syphilitic virus applied to the genital organs of a healthy person, from ulcers caused by other acrimonies externally applied to the same parts.

3. Secondary syphilitic ulcers, the consequence of a general infection, from ulcers arising from scrofula, herpes, scurvy, or any other acrimony deposited from the system on the genital organs, or any other part of the body.

4. Syphilitic ulcers, from aphthæ, or ulcers in the

mouth, on the tongue, lips, gums, &c., produced by scurvy, or by some acrid humour in the stomach.

5. Syphilitic ulcers of the mouth, throat, &c. from mercurial ulcers caused by the acrimony of the saliva during the use of mercury.

6. Ulcers originating from the syphilitic virus directly applied to the part, or deposited from an infected system, from ulcers which from time, and the use of mercury or other remedies, have lost their original syphilitic character, and which, instead of healing, are aggravated by the further use of mercury. These ulcers are owing to an acrimony of the fluids, or to the debilitated or irritable state of the system produced by the continued use of mercury, or by an improper treatment.

Our success in practice, our reputation, and the welfare of our patients, depend on this accurate and precise distinction between the different kinds of ulcers.

To mark this distinction, and to designate by specific terms the different kinds of ulcers, I shall pursue the plan already adopted; and in the course of this work I shall give the name of syphilitic to ulcers arising from the syphilitic virus, as I have already applied that term to blennorrhagia, caused by the virus; and I shall apply the same term to all complaints derived from this source, in order to distinguish them from those caused by other acrimonies either known or unknown, engendered in a diseased person and communicated to a sound person during the act of copulation.

Method of Cure.

I have shown in this chapter to what degree modern writers have confounded different ulcers of the genital organs, under the name of shankers, and consequently how uncertain and frequently fatal the practice which they employed. The young practitioner who fully comprehends the doctrines I have advanced, who is impressed with their truth, and who perceives their application to practice, will be sensible how much this branch of medicine has been improved, and will be convinced that the greater number of miserable objects who were formerly doomed to die, or to languish with the loss of the genital organs, may be relieved, or radically cured, by a more enlightened science, and a treatment better adapted to the nature of the complaints.

I shall therefore repeat, that the most important circumstances to be considered, when we are consulted for ulcers on the genital organs, are, 1. What is the real nature of the ulcer; what is its present condition; and what progress has it made. 2. How long the patient has been affected. 3. When we are satisfied that the ulcer is syphilitic, we must be as certain whether it is primary or secondary, that is, whether it proceeds from an immediate or original contact, or whether it is the result of a constitutional infection. 4. What remedies have been employed; and whether the patient has taken mercury, and to what extent. 5. What is, and what has been, his mode of living in respect to diet, exercise, and air. 6. What is his temperament; and if weak and irritable, it is of importance to determine

whether this debility and irritability are natural, or whether it does not rather proceed from the diet and remedies which have been employed.

All these circumstances must be carefully examined, and attentively considered, before we prescribe for the patient.

A physician of information and integrity will leave nothing to chance in these cases of ulcers, where the common practitioner, and careless quack, too often expose the life of the patient.

In some later publications it has been asserted, that ulcers, and other symptoms of syphilis, have been cured without medicine. But I have never seen nor heard from any attentive observer, that any symptoms of syphilis have been cured spontaneously.

Many modern surgeons have recommended the extirpation of every recent shanker, or syphilitic ulcer, on the genital organs, by means of caustic; that is, to apply the nitrate of silver once or twice a-day, till the successive sloughs are removed, and the bottom of the ulcer appears clean and red. This practice may sometimes succeed, but I would by no means advise it. It is true, the ulcers generally heal quickly by this treatment, but I have very often observed buboes as the consequence. At other times the virus, confined under the eschar produced by the caustic, corrodes the parts underneath, and forms a deep ulcer, which makes it necessary to employ other remedies. Besides, some constitutions will not bear the application of any acrid substance, much less that of the caustic: I have known it, when applied in very irritable or in scorbutic constitutions, produce dreadful symptoms; and I have

seen one case of mortification following a similar application.

Several other writers have recommended the same treatment for all syphilitic ulcers, whether primary or secondary; to wit, the internal exhibition of mercury, without any external application. They allege in favour of this practice, that shankers indicate the existence of syphilitic virus in the system, and that consequently, if they disappear by the simple use of mercury given internally, it is an evidence that the remedy has penetrated the system, and reached the parts affected, and that the virus is completely eradicated. To this I reply, that recent syphilitic ulcers produced by an immediate or primary infection, by no means prove that the system is infected, as they have asserted. On the contrary, they must be considered as a mere local disease, principally requiring topical applications. I will readily allow, that if they continue for some time, the infection of the whole system will necessarily follow; and then, as well as when they are produced by a constitutional infection, they are certainly, as they have asserted, the external marks which prove the existence of the virus in the system. In this case I concur in opinion, that they ought to be treated by the internal use of mercury, without any external application; for if they disappear by the internal use of mercury, without the aid of topical applications, it is an evidence that the virus is eradicated, and that the cure is complete. But when they affect the genital organs, or the hand or arm, the virus frequently excites violent inflammation and the most alarming destruction; or it is absorbed and carried into the lymphatic glands, giving rise to buboes, before the mercury has had time to produce its effects, and destroy

the virus in the affected part. I am therefore of opinion, that we ought not to confine ourselves in this case to the mere internal use of mercury. My reasons are,

1. That by topical applications we may prevent the ulcers from spreading, and becoming dangerous.
2. That by the same means we may prevent the formation of bubo.
3. That in applying topical remedies, nothing is lost, for mercury may be employed internally at the time, if judged necessary.
4. That if the patient has been rendered weak and irritable by the progress and continuance of the disease, or by the previous use of mercury, not only will this remedy be of little service in expediting the cure of the ulcer, but will rather retard it, and in many cases the further use of mercury will be injurious.

As regards the objection, that buboes very frequently appear after syphilitic ulcers of the genital organs have been cured by topical remedies, and that consequently the remedies recommended for the prevention of buboes, frequently give rise to them; I allow that we sometimes observe buboes, and even the pox after the use of topical remedies; but I am far from believing that these consequences ought to be ascribed to these remedies, the caustic excepted. There happens in this case what we observe every day without employing any topical remedies, and what we must always apprehend while the slightest vestige of a syphilitic ulcer remains. I am rather inclined to ascribe these consequences to the delay in employing topical remedies, or to the imprudent selection which the practitioner has made.

I conclude, therefore, that the most rational and certain mode of curing syphilitic ulcers, primary or se-

condary, especially those which from situation or peculiar condition lead us to apprehend serious consequences, is to unite with the internal use of mercury the application of topical remedies; and where the internal exhibition of mercury is improper, to unite topical means with the administration of internal remedies adapted to the constitution of the patient and to the nature of the disease we have to combat.

In general the best topical remedy for syphilitic ulcers is mercury, notwithstanding the assertion of modern writers. But as it is commonly applied, it often produces no effect. The preparation which I have found the most efficacious in most syphilitic ulcers of the prepuce and glans, is the red oxide of mercury, mixed with lard, or the muriate of mercury applied in powder, or rubbed with a little of the saliva of the patient on the ulcer for six or seven minutes, once or twice a-day, taking care to dust the ulcer with this powder before the prepuce is drawn forwards. In other cases the unguentum c muriate hydrargyri, or the mel hydrargyratum, or the unguentum hydrargyri griseum (ph: syph.) have been used with success. The ointment should be applied on the prepuce and glans, night and morning. Where the prepuce will not cover the glans, it is prudent to apply the ointment to the parts affected, and then enclose them in a little bag fastened behind the glans. The natural motion of the body in the common exercise of the day, will contribute to the perfect application of these remedies to the parts, and the ulcers often heal in a short time. Part of the mercury will be absorbed, and I have no doubt that slight and recent infections may be radically cured by these means alone, which should be regularly employed till the ulcer, and the hardness and

thickening of the surrounding parts, are perfectly cured. In women, these remedies are to be rubbed on the parts affected; or in some cases a portion about the size of a hazel nut is to be introduced in the vagina, taking care to apply a bandage so as to retain the ointment when it melts.

These external remedies should be regularly and uninterruptingly employed, not only till the ulcer has entirely disappeared, but till not the slightest hardness remains in the surrounding skin: for it may be established as a general rule in practice, that a syphilitic ulcer is not radically cured while the slightest hardness or thickening remains in the surrounding parts; and though the ulcer may have cicatrized, the virus, not being completely destroyed, will appear again either on the same spot or in some other part of the body.

To sum up all, I am of opinion that mercury, topically applied, is never injurious in syphilitic ulcers; but on the contrary, that it is extremely serviceable, and almost sufficient to effect the cure, when the ulcers are local and arise from a primary disease; lastly, that it is always necessary, when the progress of the disease is rapid and alarming.

When the ulcer is covered with a thick hard lardaceous crust, the best topical application is the red oxide of mercury, sprinkled on the ulcer, and afterwards covered with a little lard spread on lint, once or twice a-day, till the crust is removed; but as soon as the ulcer becomes florid, and assumes a clean appearance, the muriate of mercury mixed with saliva should be applied, or the ulcer may be washed with the *lotio syphilitica nigra*, or with the *lotio syphilitica lutea*, ph: syph. or with a weak solution of the nitrate of silver in

water, and the part dressed with lint moistened with one of these lotions.

Some modern writers, probably influenced by the opinion that the mercury exerts no immediate action on the syphilitic virus, have asserted that topically applied it had no effect in curing syphilitic ulcers.

These authors have not attended to the prompt and powerful effects produced on syphilitic ulcers of the mouth by the muriate of mercury rubbed on the gums; they have been inattentive to the sudden and powerful effects of mercurial fumigations on syphilitic ulcers; likewise to the effects of mercury on buboes in the groin, by producing a resolution and radical cure of these tumours, sometimes in the course of two or three days, when employed in frictions on the affected side below the swelled gland. These effects will certainly not be attributed to the change produced by the mercury on the system in so short a time; besides, I do not recollect to have ever seen syphilitic buboes resolved by the internal use of mercury, though I have known many which have suppurated, and several which have assumed a malignant character, during the internal use of this remedy.

Those who have asserted that the mercury exerts no specific action on the syphilitic virus, have stated that if mixed together, each will retain its original properties. But the experiment made by Dr. Harrison seems to prove the contrary. This physician took the matter of a syphilitic ulcer on the genital organs, and having rubbed it with the black oxide of mercury, he inoculated himself with the mixture. No infection followed; but the same matter, inoculated pure and without being mixed with mercury, produced a syphilitic ulcer.

But independent of all these facts and arguments, the constant effect of mercury locally applied, in numerous cases under my care, have completely satisfied me of the powerful and immediate action of this remedy on the syphilitic virus.

Topical remedies, however, are not sufficient; and it is necessary at the same time to administer mercury internally when syphilitic ulcers have existed for some time, or when they proceed from a constitutional infection, in the first instance to prevent the system becoming infected, and in the second to eradicate the original taint. In the former instance its use must be continued for twelve days or a fortnight after the ulcers have cicatrized; in the latter, a full mercurial course is necessary.

In obstinate syphilitic ulcers, fumigations with the red sulphuret of mercury, applied to the part affected, have been used with success.

Some ulcers, to all appearance syphilitic, which do not yield to the internal or external use of mercury, or which, after assuming to a certain degree a better aspect, remain stationary or even grow worse under the use of mercury, seem to have lost their original syphilitic character, and then frequently become very sensible and irritable. In such instances, it would be improper to continue the use of mercury in any other form or preparation, as was the common practice in the old routine. In several parts of this work I have mentioned examples of distressing and often fatal consequences resulting from this injudicious practice.

When such ulcers have continued for some time, they generally affect more or less the constitution of the patient, and these often require great discernment on the part of the practitioner. The use of sedatives is

alone adapted to some cases; in others, tonic remedies are to be preferred. In some cases I have seen excellent effects from the linimentum viride, ph: syph. spread on lint, and applied once or twice a-day. When the ulcer has become callous, stationary, or truly atonic, the application of the caustic is not only very useful, but sometimes absolutely necessary.

An hemorrhage sometimes occurs, especially when the ulcer has penetrated into the substance of the urethra or into the corpora cavernosa. It might prove dangerous if not speedily checked, which may be accomplished by compression, or by injections of astringents, or the oil of turpentine, and by the internal use of balsams.

When the swelling of the prepuce prevents our discovering the diseased part, leeches may be applied to reduce the swelling, at the same time employing injections adapted to the nature of the complaint. If these means fail and the glans cannot be uncovered, we must insist on the division of the prepuce in order to discover the seat of the disease; for without this step it is often impossible to effect the cure. We have given a particular description of the operation in chapter VII.

Ulcers, and many other symptoms of syphilis, which resist the action of mercury, are often successfully treated by a saturated decoction of guaiacum or sarsaparilla, as prescribed in the pharm: syph.

In some of these obstinate and inveterate ulcers, the internal use of opium has been successfully tried. It has likewise been applied externally, dissolved in water or alcohol, alone or in combination with camphor. The extract of the conium maculatum, dissolved in water, has been likewise employed, and it appears to act on

the same principle. Doctor Quarrin states, that he gave it with great success, applying at the same time a little of the muriate of mercury on the part affected. With the same view some of the preparations of lead have been recommended, as the white and red oxides of lead, the acetite of lead, &c. They are powerful remedies, but their use requires some attention, for they sometimes produce violent effects, especially if the surface of the ulcer is very extensive. The same physician has recorded a case where the penis lost, after the application of this remedy, its natural sensibility and the power of erection; the patient was affected likewise for years with pains in his groins, in the perinæum, and the joints of his extremities, of which he was finally cured by the warm bath and the internal use of sulphur.* J. Hunter has recommended, that ulcers which become stationary during the use of mercury, and phagedenic ulcers of the glans, should be gently touched with the nitrate of silver. He is of opinion, that the diseased surface, and the fresh granulations arising from this surface, must be destroyed before the ulcer can cicatrize: he states, that these ulcers often heal, and sometimes cicatrize rapidly, after being once or twice touched. The confidence which ought to be put in this practice, can only be decided by repeated observations and experiments. In the few cases of phagedenic ulcers

* These pains must not be confounded with the erratic and frequently alternating pains of the genital organs and the neighbouring parts (the testes, the perinæum, anus, bladder, &c.) originating from ill treated syphilitic blennorrhagia or ulcers, which resist all the usual remedies, and even a course of mercury, but which are expeditiously and radically cured by the inoculation of blennorrhagia.

in which I have tried it, the effect did not answer my expectations. Indeed I must state, that though the application of caustic may in some instances prove very beneficial, there are many where the application is followed by evidently bad and sometimes dangerous consequences.

In ulcers which apparently depend on the atony or simple relaxation of the parts, or which discharge an acrid, ichorous, and corrosive matter, and which are frequently combined with an atony or cachexy of the whole system, mercury is equally injurious; the same is true in aphthæ and scorbutic ulcers. A residence in the hospitals, and even in the large towns, is fatal to such patients. They require the salubrious air of the country; a nourishing and strengthening diet; the moderate use of good Madeira, Sherry, Hungary, and Claret; exercise in the open air; sometimes the application of caustic, then of astringents, such as the decoction of the root of the tormentilla erecta, or an infusion of cinchona in red wine or lime water, together with the internal use of these remedies, and sea-bathing. In such cases I have found the internal and external use of the decoctum syphiliticum roborans, ph: syph., very beneficial, after all other remedies had failed, and the disease seemed desperate.

In other cases, the lotion made with the sulphate of zinc alone, or combined with camphor, or a watery solution of the sulphate of copper, or the green oxide of copper dissolved in oil or mixed with honey, are preferable. I have been informed, that several sailors, in a voyage from Batavia, were readily cured of ulcers on the fingers, which resisted all other remedies, by brass filings sprinkled on the affected parts.

In recent ulcers which were not syphilitic, but proceeding from an infection after an impure connection, or from any other acrimony, the best remedy I have found was the application of the tincture of rosemary, or simple brandy. Lint, or folded linen, dipped in the fluid, is to be applied to the ulcer six or eight times a day, or oftener. This remedy, at first, causes a slight degree of pain, which soon goes off, and the ulcers generally disappear in a few days. I must mention a singular circumstance, which I observed when I first used this remedy on myself. It was in very warm weather, in summer, when the scrotum is naturally very much relaxed. On pouring a few drops of the spirit of rosemary on the glans, I experienced a burning heat, which was immediately communicated to the scrotum, with the sensation of considerable heat, as if hot water had been applied, and accompanied by a visible contraction of the cremaster muscle through the whole extent of the scrotum. This is an instance of striking sympathy between the glans and scrotum, in which the action of one part is propagated in a distant part, for I experienced no such sensation in the penis. The fact appeared to me remarkable, and I do not recollect that it has been mentioned by any person.

The efficacy of this remedy was first communicated to me by my friend Doctor Nooth, who had employed it with success in the Military Hospital, as a gargle in cynanche maligna, and as one of the best topical applications in all other erysipelatous ulcers, on their first appearing.

In fungous ulcers of the glands, we are advised to amputate the penis: I have never had recourse to this dreadful operation. I have succeeded in some cases

pronounced incurable, by employing the foregoing remedies, which I varied according to the state of the patient and the nature of the disease. In one case I employed, with success, the external application of the liquor ad condylomata, ph: syph. In another case, the use of wine and bark, and externally of the lotio syphilitica lutea, ph: syph., with strengthening diet and moderate exercise in a healthy country, produced the same happy effects. I must remark, that in many such cases, the constant application of the catheter or bougie becomes necessary to procure a free passage for the urine, and to prevent the formation of sinuses, fistulæ, or the destructive extravasation of urine.

The pruritus and excoriations of the glands and prepuce, which particularly affect men advanced in life, are often very obstinate and troublesome; the application of the lotio syphilitica nigra, or lutea, ph: syph., generally succeeds very well; but some obstinate cases are more advantageously treated with a solution of the acetite of lead, or with the ointment of lead, rubbed on the part twice or thrice a day. After other remedies had failed, I have known the citrine ointment, with double the quantity of lard, prove successful in some cases. J. Hunter states, that he succeeded in obstinate cases of this kind, by directing the patient to keep the glans uncovered.

The ulcers and excoriations at the orifice, or beginning of the urethra, usually yield to the application of the linimentum viride, ph: syph. A drop or two is to be poured into the canal twice a-day; and a piece of lint, moistened with the same, is to be afterwards introduced.

Syphilitic ulcers seated in the rectum, are very dif-

licit of cure; for we are rarely consulted before they have made a dangerous progress. The best remedy is the muriate of mercury, introduced into the rectum, or an injection composed of the *lotio syphilitica lutea*, ph: syph., twice or thrice a-day, particularly after the patient has been to stool. Opiate glysters are very serviceable, but the internal use of mercury must not be omitted.

In women, ulcers, whether syphilitic, or of any other character, require the same treatment as in men. It will suffice to observe, that in them ulcers of the genital organs do not so frequently assume a malignant appearance, and that they generally yield readily to the remedies we have recommended. When the ulcers are seated high up the vagina, or in the uterus, these remedies will be most conveniently applied in the form of injection.

There is a particular disease of the vulva with whose cause we are unacquainted, and which has principally appeared among young girls in the Orphan Hospital. It first appears with a dark red or livid spot, which extends rapidly, corroding all the soft parts down to the bones, and attended with an insupportable fetor. I can say nothing respecting the treatment, having never seen the disease, except that the most powerful antiseptics have been recommended. I think the application of alcohol should be tried immediately on the appearance of the disease, and the application ought to be repeated eight or ten times a-day.

The ulcers of the uterus, or of the vagina, which are accompanied by an acrid ichorous discharge, are not always cancerous, as is generally supposed; very often they are syphilitic, and require the use of mercury. I

have seen many cases of women, who, from the pain, and sanious discharges occasionally tinged with blood, with which they were affected, imagined themselves attacked with cancer of the uterus; in this respect trusting to the opinion of those whom they consulted; who have been notwithstanding radically cured by the internal and external use of tonics and absorbents: frequent injections with the infusion of cinchona in lime water, alone, or mixed with the mel cupratum, ph: syph., and a little of the tincture of mastic, myrrh, or assa fœtida, sometimes produce in these cases excellent effects.

I must here remark, that if the ulcers of the vagina are very extensive, in cicatrizing the orifice or the cavity of the vagina becomes considerably contracted. To prevent this contraction, the patient should be directed to wear a pessary in the vagina during the cure. Here, as in many other cases, it is much easier to prevent the disease, than to effect the cure when once formed. I knew a woman who, for want of this precaution, laboured under a contraction of this kind, through which the smallest bougie could scarcely be introduced.

When these ulcers occur in women, it is of primary importance, both for the tranquillity of the patient, and the satisfaction of the physician, that the seat of the disease be ascertained. The patients are often in the most painful distress of mind, and imagine that they are affected with a cancerous, scrofulous, and scorbutic ulcer of the uterus or vagina, on perceiving an acrid, ichorous, corrosive discharge, while in fact there is no ulceration of the parts; but the acrid matter is either secreted in these parts, or deposited from the mass of blood in the cavity of the uterus, or vagina, by the small vessels, as by so many emunctories. If this excretion

is checked accidentally, or by improper means, the patient is afflicted with pain and sense of weight in the parts, or with pain in the stomach, accompanied by indigestion, anxiety, difficult respiration, and violent head-ache, which alternate with the discharge. All these symptoms gradually disappear, when the physician, on discovering the nature and cause of the complaint, employs internal remedies adapted to the original disease, and such topical applications as tend to allay irritation, and to defend the tender and excoriated parts from the action of the acrimonious discharge, and to restore the lost tone to the vessels.

But it would be erring, to expect advantage from such injections as are commonly employed, in such cases, in blennorrhagia, or in hemorrhage of the uterus. If we are desirous of obtaining any good effects from injections, they must be applied to the part affected, frequently, and by means of a syringe adapted to the purpose, not at random in the vagina, in hopes that they may reach the seat of the disease. The syringe must be furnished with a pipe of suitable form and size, and so adapted that the injected fluid may not escape along the sides of the instrument. The patient should be in bed, lying on her back, with her head and breast lower than the rest of her body, and with her knees bent. In this position the injection should be administered by herself, or by an assistant, three or four times in succession. Each time the syringe must be kept applied for a few minutes, and the operation repeated six or eight times a-day. A gum elastic bottle, with a pipe rather longer and thicker than common, will answer the purpose completely, and obviate the prejudices so un-

justly entertained against the efficacy of injections in women.

If the matter discharged from the ulcers is so acrid as to corrode, or to threaten the excoriation of the skin, the white cerate, or some mild liniment, should be applied twice or thrice a-day, to defend the parts.

If the discharge proceeds from an abscess formed in one of the ovaries, as sometimes happens, all remedies are useless; when the powers of nature cannot effect the cure, a skilful surgeon should not hesitate to propose the extirpation of the diseased ovary, as the most certain means of saving the life of the patient. Medical history contains many examples of success from this operation, and the women for many years enjoyed perfect health. Mr. Laumonier, surgeon-major in the Hotel Dieu at Rouen, has lately performed the operation with great skill and success, and has given a very interesting history in one of the volumes of the Society of Medicine in Paris.

The *materia medica*, as far as I know, contains no remedy for the real cancerous ulcers of the genital organs, or of any other part of the body: the cicuta, and other boasted remedies for cancer, have owed their reputation to imperfect observation, or the spirit of exaggeration in those who have recommended them. Extirpation alone can afford a radical cure, when recourse is had to it in time, and when the situation of the disease will permit; and a physician of integrity will never recommend uncertain remedies, to amuse the patient, and make him lose the time for employing the only certain one; I mean the extirpation, when performed in time, and when the circumstances will permit. (See Chap. 9.)

SECTION II.—*Of Syphilitic Fistulas.*

Treating of syphilitic ulcers, we may take notice of Fistulas, which are nothing more than ulcers penetrating deep in the cellular membrane, with callous orifices. They are most commonly seated in the groins, perinæum, or in ano, &c.

They usually proceed from ill-treated blennorrhagia, or bubo, or from a stricture in the urethra not cured in time, or from an external opening of an ulcer being small, and hence cicatrized before the bottom had healed. In cases of dysury, the urine, lodging, frequently causes inflammation and suppuration; and, in the end, passages into the cellular texture, termed sinuses, where they have no external opening; and fistulas, or fistulous ulcers, when they open externally. The febrile symptoms which occur after the appearance of fistulas, as in the instance of buboes, are merely symptomatic, and disappear when the fistulas are cured. These parts readily suppurate; and an emollient poultice, applied for few hours, will soon remove the hardness, and ripen the abscess. When the abscess is formed in perinæo, it must be immediately opened to prevent fistula.

Besides the internal administration of mercury, and the constant use of bougies, which often radically cures fistulas, repeated warm baths should be tried daily for some months, and the lotions we have recommended should be used in the form of injections; but in the first place, the opening of the fistula must be enlarged: this is often sufficient for the cure of fistulas, without other means being employed. A bougie passed into the fistula, fre-

quently produces suppuration and effects the cure; but if these means do not answer, the operation becomes necessary. But it ought not to be attempted before the syphilitic taint is eradicated from the system. From neglect of this necessary precaution, we daily see persons subjected to the operation two or three times, without success, and the fistula remains as obstinate as ever; or if it heals in one spot, it soon breaks out in another. If the fistula heals quickly and perfectly after the operation, it is a proof that the virus has been eradicated from the system.

In performing the operation, the patient should be placed at the edge of the bed, on his side, with his thighs bent, and an assistant should hold his knees and keep them steady, while another assistant should separate the buttocks. If, by the division of an artery, hemorrhage occur, the assistant is to apply dossils of lint to the wound, and make pressure on the part for two hours. The fistula must be laid open at the bottom, so as to discover the whole extent of the ulceration; but care should be taken to cut as little as possible of the sound part of the internal surface of the urethra. In men, a sound is to be introduced into the urethra, and a probe into the fistula, in order to ascertain the seat of the original abscess. If the sound and probe do not touch, we must cut through till the whole fistulous canal is laid open, and even the sinus to which it leads. If the abscess is seated nearer the prostate, it is often necessary to cut into the urethra on each side of the stricture; and then a larger portion of the urethra being laid open, the cure of the stricture will be much facilitated. In this case, the catheter must be constantly kept in the urethra, to expedite the cure of the fistula or sinus which

has been opened. It has been observed, that there is a limited time for keeping the catheter in the urethra, beyond which its presence, instead of expediting, retards the cure and prevents the ulcer from cicatrizing. It must, therefore, be withdrawn when the ulcer becomes stationary, and be only occasionally introduced; but after the cure is accomplished, the patient should continue the use of bougies for some time. The ulcer should be dressed from the bottom, so as to prevent the reunion of the divided parts, so that it may granulate from the bottom and form a sound cicatrix. Moreover, what has been observed on the treatment of syphilitic ulcers, is applicable in this plan.

The *fistula lachrymalis*, arising from the syphilitic virus lodged in the lachrymal sac, yields very often a yellow greenish puriform discharge, resembling what proceeds from the urethra in blennorrhagia; in some cases which have been much neglected, or irritated by improper treatment, a real ulcer is formed; or, as Pott has well observed, the cavity of the lachrymal sac is filled with a soft fungus of an unhealthy character, which secretes abundance of sanies. I cannot say positively whether it is ever the effect of a suppressed blennorrhagia, as some cases of ophthalmia; but it often is of a syphilitic taint, in which case it is frequently accompanied by a caries of the bones. In this instance, the fistula lachrymalis is a secondary disease, the result of the morbid condition of the ethmoide bone, and of the ossa spongiosa; and it cannot be cured by any topical means, without the assistance of a course of mercury.

CHAPTER XII.

Of Syphilitic Buboës.

BY the term bubo, is understood a swelling of one of the lymphatic glands, tending to suppuration (*glandulæ conglobatæ tumor suppurans, Cullen.*)

The tumours of the inguinal glands were known to the ancients, and we find them described under the names of Struma and Phygethon. But it is principally to the discoveries of modern anatomists, that we are indebted for an accurate knowledge of the nature and origin of these tumours.

Though these tumours may arise in every part of the body where there are lymphatic glands, we have not any authentic observation, which proves that the syphilitic virus has ever attacked other lymphatic glands, than those of the groins, armpits, and extremities; hence the distinction of inguinal, and subaxillary, syphilitic buboës, &c. The first are the most common, because the genital organs are the most frequently exposed to the contact and absorption of the syphilitic virus; and the inguinal glands, being the nearest, are consequently the most exposed to the action of the same virus.

Buboës frequently originate from the virus lodged on the surface of the body, causing a simple irritation of the absorbent vessels, terminating in the glands, without being absorbed by them; and this irritation being propagated to the neighbouring glands, produces

a swelling of them; hence the distinction, essential in practice, between idiopathic and sympathetic buboes. In the former, the cause exists in the gland; in the latter it is distant. For want of sufficient attention to this important distinction, serious mistakes have been and are daily committed in practice. This distinction being founded on the most obvious facts, is absolutely necessary to regulate the plan to be adopted in the treatment of these tumours.

Buboes admit likewise of another distinction. It appears that an acrid matter, existing in the body, may be deposited on these glands through the medium of the circulation, by metastasis; pestilential and scrofulous buboes seem to arise from this cause.

I am of opinion, that syphilitic buboes sometimes originate in this way, though it has been denied by some modern writers. I have frequently observed inguinal buboes, though the patient had not been exposed to the infection; and in two instances, the patients had not been with women for several weeks; but some months before, they had been infected with syphilis.

From these observations, buboes should be distinguished into primary or original, and into secondary, constitutional or symptomatic; in other words, into buboes proceeding from an immediate infection, and into buboes which are supposed to proceed from the virus deposited from the circulating mass on the gland: a distinction which will appear, in the course of the work, to be of importance in practice.

Experience demonstrates, that idiopathic buboes proceed not only from the absorption of the syphilitic virus of an ulcer on the genital organs, but likewise from a syphilitic ulcer on any part of the superior or

inferior extremities of the body. I will relate some cases, in illustration of this doctrine.

About twenty years ago, I had the misfortune of being affected with a syphilitic ulcer on the glans. Being then on a journey, I took some mercurial pills; by the use of which the ulcer was cured in about ten days. I then discontinued the pills, and felt no complaints till six months after, when I was one night awakened by a violent itching at my right elbow. Next night the itching returned; and the third morning, upon examining the spot, I found it covered with a thick yellow scurf, like a tetter. As I had no medicines with me, I was obliged to defer applying any remedy; when two days after I perceived a swelling under my armpit, which in three days more increased to such a degree, that I was obliged to keep the arm at a considerable distance from my side. By the application of the mercurial ointment to the tetter twice a-day, the tumour was in a few days discussed; and the disease, by a course of mercury, perfectly cured some weeks after.

About fifteen months after, I felt a pain in the middle of the sternum, which I supposed to be rheumatic. On this supposition I rubbed the part affected with a piece of flannel night and morning: by this means the pain in the sternum was removed; but the second morning after, the great toe and the next to it of the left foot, were in like manner affected. This pain being removed by the friction with flannel, as before, returned to the sternum, from which being driven by a similar friction, it again returned to the foot. I now began to imagine that the complaint might be the gout; and having occasion to go abroad that day, I bathed my foot in warm water, and pared a corn. I trod for some

time on the second toe, in order to walk the more easily. In performing this operation I cut the flesh, and a few drops of blood followed. The next day, on examining the part, I found a little suppuration had taken place, I therefore covered the sore with a piece of clean linen. The second evening I felt a slight pain in the groin, which continuing the next day, and being followed by a swelling, about the size of a pigeon's egg, in one of the inguinal glands, induced me to suspect that the pain in the sternum, and the toe, might be syphilitic, and that from the wound of the toe, and succeeding suppuration, the virus had been absorbed by the lymphatic vessels and carried to the first gland they met, which was one of the lower glands of the groin. The ulcer of the toe still continued, but was very small, and discharged matter resembling pus. I applied a mercurial plaster upon it, and rubbed the mercurial ointment on the inside of my leg and thigh of the affected side, twice a-day; in four days the bubo was discussed, and by continuing the frictions for twenty days, the cure was complete.

Some years ago, a celebrated accoucheur in London was called to deliver a woman, who, unknown to him, was affected with syphilitic ulcers of the genitals. The consequences were severe, and dreadful ulcers of the hand, and a swelling of the lymphatic gland on the inside of the fore arm.

Sympathetic syphilitic buboes, as I have already mentioned, owe their origin not to the absorption of the syphilitic virus, but to an irritation of the mouths of the neighbouring lymphatic vessels. This species of bubo we frequently meet with in blennorrhagias; or where one of the glands is idiopathically affected, we

see two or three contiguous thereto swelled by sympathy. In this case, however, only that which is really infected continues to increase in bulk, while the others remain in the same state, never suppurate, and at last disappear when the neighbouring irritation is removed; unless the patient, by frequently touching and pressing the affected gland, should occasion a real inflammation and suppuration.

Sympathetic buboes go off spontaneously, as soon as the irritating cause in the neighbourhood is removed; and it is only this kind of buboes which quacks, with their pretended nostrums, seem to remove sometimes in a few days; while, on the other hand, we frequently hear patients complaining of intelligent physicians, for not having been sufficiently expeditious in curing their bubo, or not having done it without suppuration; though they had formerly been radically cured by a quack, by the simple application of a mercurial ointment or plaster to the part affected. If such patients, however, were acquainted with the difference between the true nature of their present and former complaint, they would easily see, that, in the former case, the cure was not to be attributed to the ointment or plaster applied, but merely to the nature of the disease; whereas, in their present situation, perhaps great skill and attention is requisite, either to discuss the bubo, or to cure it after the attempt to discuss it has failed.

Several cases have occurred in the course of my practice, which prove, that buboes may sometimes originate from an immediate absorption, without being preceded by any excoriation or ulcer on the genital organs, or on any other part of the body; though this has been denied by some late authors. About twelve

years ago, in the course of one week, three soldiers were admitted in a military hospital, affected with bubo, which they had caught from the same woman: they had all been in perfect health a few days before: at the time of admission, not one of them had the slightest excoriation on the genital organs or thighs, nor the least appearance of a running. Since that time I have seen many similar cases.

I do not pretend to determine whether this immediate absorption should be ascribed to a torpor of the lymphatic vessels, or to a less degree of irritability in the absorbent system, or to a more volatile or diluted virus. This immediate absorption of the syphilitic virus, which may occur when we least expect it, renders all prophylaxis extremely precarious, and even useless; for while employing the best preventives, which may be efficacious in preventing blennorrhagia and shankers, we are still exposed, on this account, to have buboes, and even the pox.

As regards buboes, we must always bear in mind the general observation made respecting all other syphilitic complaints: to distinguish accurately between those buboes which are usually syphilitic, and those which arise from some other cause or acrimony, as scrofula, or plague, &c.

I must introduce another distinction, which appears to me to be highly important in practice, by dividing buboes into tonic and atonic. I know of no appellations better adapted to these two kinds of buboes.

The bubo which I shall term tonic, is accompanied by evident symptoms of phlogosis, or inflammation, which are often violent, and by a full, hard, and quick pulse. In what I denominate the atonic bubo, we ob-

serve precisely the reverse. All the symptoms indicate great debility or irritability, and are frequently accompanied by a very frequent, feeble pulse. The fever in either instance is symptomatic, and clearly indicates the nature of the disease. In the former, the inflammation and suppuration are confined to the gland, and advance rapidly: in the latter, the progress is feeble and slow; or if rapid, it is because the inflammation and suppuration extend to the surrounding parts. The tonic bubo is red; the atonic has rather a livid colour. They might be supposed to depend on different causes, so much do they differ in character, and in the treatment required. A late writer has divided these two kinds of buboes into inflammatory and erysipelatous; but the terms appear to me to be vague, and not so well calculated to direct our practice as the distinction of tonic and atonic. The latter kind has been often confounded with scrofulous bubo; but I must remark, that of late the term *scrofula* has been used in the same manner as the terms malignant fever, nervous, bilious, and scorbutic disease; not to designate the particular nature of the disease, but to conceal the ignorance respecting the real nature of some diseases.

Having thus established the essential distinctions between the different kinds of syphilitic buboes, I should now proceed to speak of the method of treating them; but previous to this I think it will be useful, and even necessary, to take notice of some prejudices prevailing among a number of patients, concerning the nature and cure of the complaint.

Many people, especially the inhabitants of the more southerly parts of Europe, think it dangerous to resolve

or discuss a syphilitic bubo. This prejudice arises from an opinion, that the virus is by this means repelled and absorbed into the mass, where it afterwards occasions a general infection: whereas, if the bubo were cured by suppuration, they imagine that no infection of the mass was to be apprehended; but that, on the contrary, even in case any poison should have been absorbed during the suppuration of the bubo, the virus lodged in the gland would thus not only be carried off, but the whole mass would thereby be purified. Hence they imagine, that the abscess formed by the suppuration of the bubo, is a kind of channel for cleansing the body entirely from all the syphilitic virus. As this opinion, however, is not only altogether erroneous, but may prove hurtful to the patient, at least by depriving him of an advantage which he might otherwise have enjoyed, I shall make two observations on the subject. First, that by the practice of applying the mercurial frictions, not on the affected gland, but on the inside of the thighs and legs, the discussion of a bubo cannot possibly occasion any such thing as a repulsion of the syphilitic virus into the mass; that, on the contrary, the virus lodged in the gland itself is thereby effectually destroyed. And secondly, that though the virus should have been actually repelled from the gland into the mass, such a repulsion would be preferable to the method of curing the bubo by suppuration.

In order to exhibit this matter in the clearest light, and to explain distinctly how the frictions, according to the improved modern practice, act, we must first become acquainted with the anatomical discoveries lately made in the absorbent system; after which it

will be easy to comprehend the effect of mercurial frictions, applied in the manner I shall shortly describe.

We learn from the anatomical observations referred to, but more particularly from the plates by Mr. Hewson, and especially from those lately published by Mascagni, that the lymphatic or absorbent vessels commence on every part of the surface of the body by very minute ramifications; that in passing upwards from the lower extremities, they unite into larger branches, which finally terminate in the inguinal glands, pouring into them the fluid they have absorbed at their extremities. This fluid, which in the natural state is nothing but water, or mild lymph, more or less diluted with water, after being deposited in the glands in the groins, is again absorbed by other lymphatic vessels, which carry the same into the abdomen, and thence through the thoracic duct into the mass of blood. Let us now suppose, that a portion of syphilitic virus has been absorbed by the lymphatic vessels of the genital organs, or of the lower extremities, and that consequently it has been carried along with the lymph into one or more of the inguinal glands. The virus, thus brought into the gland, will either be absorbed again by the opposite absorbent vessels, in which case it is carried into the mass; or, what more frequently happens, it will, by its acrimony, excite an irritation in the gland, and thereby not only prevent its own absorption, but produce an inflammation and swelling of the gland, termed a bubo. In those circumstances it would be most eligible to eradicate, if possible, the virus lodged in the gland.

Without laying great stress on the experiment made by Dr. Harrison, in which the syphilitic virus, being

trituated with the oxyde of mercury, was rendered perfectly inert, we know that mercury is a specific in counteracting the effects of this virus. But the question is, how to introduce it into the affected gland. Formerly practitioners, from a defect of anatomical knowledge, imagined they could introduce the mercury into the gland, by rubbing the mercurial ointment on the gland itself; but so far was this from having the intended effect, that buboes treated in this way generally grew worse, inflamed, suppurated, and even sometimes mortified. By such an application, no mercury is introduced into the affected gland; or if it now and then happens, it is merely by chance; for the absorbent vessels arising from the skin immediately over the gland, do not take their course into the substance of the gland, but proceed obliquely towards the abdomen. Hence the bad or good effects produced in that case are not to be ascribed to the mercury, but rather to the mechanical irritation occasioned by the friction, and would probably have taken place, if any other ointment had been employed. But if instead of rubbing the mercurial ointment on the gland itself, the same be rubbed into the thigh or leg of the side affected, we are to expect, according to the discoveries of the course of the lymphatic vessels, that the mercury will be absorbed by their extremities, and from thence conveyed to the affected gland; where, meeting with the syphilitic virus, it will most effectually exert its specific power against it. The correctness of this doctrine appears from the success which has attended this practice. For if the mercurial frictions have been applied in a proper manner, and in time, before the inflammation has made too great progress, we find that, in a great number of buboes, the virus is thereby de-

stroyed, or at least so changed in its nature, that it is now rendered incapable of irritating the gland, and the tumour disappears. And we do not observe that the virus thus changed, and then absorbed along with the mercury, ever after produces any symptoms of syphilis in the system.

But let us even suppose that the mercury has not destroyed the virus lodged in the gland, but has driven it into the blood, as those patients commonly believe. What will be the consequence? The same undoubtedly, to use a metaphoric expression, as when a victorious hero dislodges and chases a flying enemy before him. The same remedy which expelled the virus from the gland, will expel it altogether, or render it one way or other harmless and inoffensive to the body.

To elucidate this matter still further, I shall answer a question which I have heard frequently proposed: viz. Why does not the method of rubbing mercury into the extremity always succeed in discussing the bubo? For the solution of this question we must have again recourse to anatomy, which teaches us that there are two series of lymphatic glands in the groin, called the upper and lower inguinal glands. In most people there is a communication between these two orders of glands; in this case, the lymphatic vessels of the inferior glands communicate with the superior ones; whence again others arise, which take their course through the abdomen into the thoracic duct. But in other persons there is no such communication; the lymphatic vessels of the inferior inguinal glands proceed directly to the abdomen, without inosculating with the superior ones. Now the syphilitic virus being absorbed by the lymphatics of the genitals, is generally carried to the superior inguinal

glands, where it produces the bubo. Wherever, therefore, the inferior inguinal glands have the above-mentioned communication with the superior ones, the mercury rubbed into the inside of the thigh or leg will be absorbed, carried to the inferior, and from thence to the superior inguinal glands, where it will produce the desired effect. But on the other hand, where no communication of this kind takes place, the mercury is carried from the extremity to the inferior inguinal glands, and from thence to the abdomen, without ever reaching the affected gland, on which, of consequence, it can produce no effect.

The same will happen when the inflammation of the bubo is gone too far, or when a scirrhus hardness is formed in the gland. Mercury, in these cases, can have little or no access to the gland; or, though it could, would exert but little action on a disease which has changed the organization of the part.

But let us even go further, and suppose, that the method of treatment just recommended has not been followed; but that instead of it, the irritation has been allayed, and the absorption of the virus from the gland has been effected by sedative or discutient applications. What will be the consequence? I answer, instead of a bubo, the patient will probably be affected with a disease of the whole system; which, if recent, may be easily and radically cured in a few weeks time, without any bad consequence remaining: whereas, the bubo with which he was affected before, is sometimes not only very dangerous, at other times extremely obstinate, and always very tedious of cure. Besides, even when the suppuration is of the best kind, which, however, is far from being always the case, the virus, instead of

being entirely evacuated by the opening of the abscess, is, if not constantly, at least very frequently, absorbed into the system, producing the disease which the patient dreaded so much; for the cure of which he will at last be obliged to have recourse to mercury, the remedy he was formerly so much afraid of.

Method of Cure.

From the observations laid down, it appears that every unprejudiced practitioner, in any case of an idiopathic bubo, should always attempt to discuss it as soon as possible, by any method whatever, provided the inflammation has not risen to too great a height, or signs of suppuration have already made their appearance. The most effectual method of discussing tumors of this kind, is, as I have already stated, to make the mercurial frictions on the inside of the thigh and leg, or on the sole of the foot, of the side affected. The common mercurial ointment, made with equal parts of mercury and hogs' lard, or the ointment composed of lard and the muriate of mercury, are well adapted to this purpose. Gr. Cyrilla, of Naples, has recommended the oxygenated muriate of mercury triturated with lard in the form of ointment. The trials lately made with the oxygenated ointment, have not answered.

If the inflammatory symptoms are violent, general and topical bleedings, together with the antiphlogistic regimen, should be directed; but this will not preclude the resolution of the bubo by the means already proposed. I do not apprehend, according to the opinion of some authors, that the stimulus of the mercury will increase

the irritation from the syphilitic virus; for when a certain quantity of mercury passes into the gland, we observe that the irritation occasioned by the virus is allayed and dissipated by this remedy: in my own person I have observed, the gland becomes from that time less painful, and softer; the swelling subsides, and in a short time entirely disappears. The assertion lately advanced by a modern writer, that it is equally beneficial, and even more advantageous, to make the frictions on the sound side, appears to me totally devoid of probability.

In order that the mercury may be taken up by the absorbent vessels through which the virus has passed, or as near to them as possible, and that the greatest advantage may be obtained from its effects, the surface on which it is applied should be as large as possible.

Buboes are seated in different parts of the groin, according to the different position of the inguinal glands. This will be readily understood by consulting Mascagni's anatomical plates. In most cases, the absorbent vessels of the penis, in others, those of the groin and thigh, convey the virus to the gland. These observations indicate where the mercurial frictions should be applied to effect the resolution.

When the bubo is seated in one of the superior inguinal glands, we conclude that the absorption is from the penis; hence the advantage, besides the frictions on the thighs, of applying the mercurial ointment to the penis, by means of a bag, as indicated in the treatment of shankers. The motion attendant on the common exercise of the day, causes a kind of friction, which favours the absorption of the mercury. Or if preferred, the muriate of mercury, combined with saliva, may be applied.

between the glans and prepuce. If the bubo appears in the lower part of the groin, the leg and thigh present an extensive surface for the frictions. If the bubo is situated on the lower part of the abdomen, besides the frictions on the leg and thigh, they should be applied to the penis, scrotum, and groin.

In women, inguinal buboes are generally found near Poupart's ligament, or between the labia externa and the thigh, or on the groin. Besides the inunction on the thighs, the muriate of mercury should be constantly applied to the labia externa, both on their internal and external surfaces.

If the lymphatic glands of the fore-arm are affected, the friction should be made on the hand and wrist; if those in the axilla are diseased, the friction should be extended over the arm.

As those frictions are intended to effect the resolution of the bubo, and as their success is confined to a few days, not only do they require great care and attention, but if circumstances permit, they should be repeated twice a-day, employing each time about one dram of the ointment. The frictions should be repeated till the bubo has disappeared, and even until the mouth becomes affected.

If, in spite of all our endeavours, we cannot succeed in discussing the bubo, and suppuration takes place, the mercurial frictions will be attended with no evil consequences, as far as I have observed; and I cannot conceive how the frictions, continued for four or five days, (and they cannot effect the resolution of the bubo after this period), can prove the cause of a malignant ulcer, as asserted by some writers. The apprehension appears to me chimerical, and to be derived from the hypo-

thesis, *that the mercury resolves buboes merely by its action on the system at large.* This hypothesis is contrary to every day's experience. Twice I have been cured of inguinal bubo, and once of an axillary bubo, in the space of three or four years, by mercurial frictions performed in the manner I have proposed; and I have cured a great many persons by the same process.

If this be compared with the proposition in the preceding chapter, that original syphilitic ulcers may be cured by the mere topical application of mercury, it will be seen, that my opinion acquires an additional degree of probability; to wit, that the mercury produces its effects by its immediate action on the virus, independent of its action on the general system.

Besides the mercurial frictions, other means are employed for discussing buboes; as low diet, cathartics, the application of snow or ice, of cold poultices made with crumbs of bread and the solution of the acetite of lead, or folds of linen dipped in this solution. If these means fail, success has attended the use of emetics, repeated for two or three days; in this way buboes have been discussed, which were ready to burst. If the inflammation is considerable, it will be prudent to premise a general bleeding: in very obstinate cases, the decoction of the bark of the daphne mezereum, administered for some days, has produced the desired effect. In the Infirmary at Edinburgh, dry cupping glasses, applied to the swelled gland, have been employed with success. The volatile linament, rubbed into and round the bubo for eight or ten minutes, once or twice a-day, has been found very effectual, in several instances, by Dr. Nooth.

From the observations of Mr. Birch, of London, it

appears that gentle shocks of electricity, passed through the thigh and gland affected, greatly assist the mercury in dissolving the bubo; and in some instances produce this effect, without any mercurial friction, even in buboes much advanced.

During the whole time that we attempt the resolution of a bubo, the patient should abstain from exercise, and confine himself to a very low diet, as a contrary regimen might greatly tend to increase the inflammation. With regard to mercurial frictions on the gland itself, I have already given my reasons for disapproving of them. Indeed, most of the idiopathic buboes, which I have seen treated, either in this way or by other irritating remedies, have inflamed and suppurated, though the application was made with a view to prevent this disagreeable circumstance. There are now but very few practitioners, let their knowledge of the recent discoveries concerning the lymphatic system be ever so confined, who would trust to such means for producing a resolution of syphilitic buboes.

When I say that mercurial frictions, or a stimulating plaster, applied to the gland, will rather be followed by an inflammation and suppuration than a resolution, I purposely mention the idiopathic syphilitic bubo; for sympathetic buboes do frequently disappear under such treatment. We ought not, however, in this case, to ascribe the resolution to the mercurial frictions, poultices, plasters, &c. which have been applied, but to the simple operation of nature; for sympathetic buboes disappear spontaneously, without any application whatever. For their removal, as I have already observed, nothing more is requisite than to destroy or remove the stimulus from the mouths of the lymphatics. This fact is

sufficient, I think, to convince us of the importance of distinguishing in practice the idiopathic buboes, from those which are sympathetic.

If after employing the frictions for four or five days, the bubo does not subside, or if there is no hope of discussing it, the mercurial frictions must be renounced, and a new plan of treatment adopted.

That a bubo will not admit of a resolution, we know by the tumour continuing to increase in size, and becoming red and painful after the proper application of the mercurial frictions, or other resolvents, for four or five days. As soon as we find our attempts to procure a resolution are frustrated, we must endeavour to bring on a mild and speedy suppuration. Here, however, we shall often meet with great difficulty; buboes being so different from one another, that the treatment which will effect a mild suppuration in one, will frequently occasion in others very dangerous consequences, or even prove fatal to the patient.

On such occasions we shall duly appreciate the distinction of buboes into tonic and atonic.

In the first kind, which is truly inflammatory, the symptoms of inflammation often advance so rapidly, and are so violent, as to threaten gangrene. Accordingly, all our efforts must be directed to moderate and subdue the inflammation. In atonic buboes, on the contrary, symptoms of great irritability predominate: high symptomatic fever, a frequent and feeble pulse, prostration of strength, livid colour of the gland, and extensive swelling of the part. In this case we must allay the irritation, and support the patient's strength, by generous diet, fresh air, opium, wine and bark. In other cases there are no symptoms of fever, the pulse

is feeble, the progress of the swelling slow, the gland remains hard and indolent, manifesting no disposition to inflame or suppurate. Here we must irritate and inflame the gland to procure suppuration or absorption, by external remedies applied to the gland, such as mercurial frictions, volatile liniment, &c. aided by repeated purging.

After we have in vain attempted to discuss the bubo, or if we are called when the inflammation has made great progress, our next care is to assist nature in the process of suppuration. In many cases, the physician must do little or nothing, if the degree of inflammation is such as will produce a speedy and mild suppuration. In most cases, a simple bread and milk poultice, or an emollient plaster, applied to the part, will be sufficient.

When the symptoms of inflammation are very violent, as we often observe in strong robust men, we must have recourse to copious bleeding, to be repeated according to circumstances; or apply leeches to the part, or make scarifications; prescribing, at the same time, the strictest antiphlogistic regimen.

On the other hand, when the symptoms of irritability are distinctly marked, as frequently occurs in delicate and irritable persons; when there is considerable symptomatic fever, with frequent and feeble pulse; when the tumour, instead of being circumscribed, is diffused and of a livid colour;—the antiphlogistic regimen, instead of allaying, aggravates the complaint; and evacuations, instead of being beneficial, will prove really prejudicial. In such cases we must direct the patient a fuller diet, with the moderate use of wine; we must administer the cinchona, and give him opium every night or every other night, applying at the same time spiritous

fomentations: these are the remedies adapted to such cases. I must here make one general remark; not to administer mercury internally, much less externally, to the parts affected, unless it be in frictions, as recommended for the discussion of bubo, during the inflammatory stage of bubo, or any other syphilitic complaint. For I have never seen the mercury produce the least benefit at this period; on the contrary, I have seen the worst effects from it, especially when rubbed on the inflamed gland. It was, probably, in a case of this kind, that Mr. Bramvilla saw a bubo prove gangrenous and fatal, after a course of the muriate of mercury, and a strong decoction of the woods was administered.

When the bubo is indolent, advancing slowly, and not attended with fever, as we frequently observe in feeble and relaxed constitutions, or in old persons, after all attempts to procure a resolution have failed, a cataplasm of the root of the atropa mandragora may be tried; and if this does not succeed, recourse must be had to the administration of mercury, with a generous diet and the use of wine. Great benefit is sometimes obtained from bark in wine, or other tonic and aromatic medicines; to which may be added the local application of less stimulating articles, as the gum plaster, or onion poultice, ammoniacal liniment, caustic, &c.

When the buboes are accompanied with symptoms of scrofula or scurvy, mercury must not be employed, but such remedies are to be used as are adapted to the nature of the particular disease.

When by this method, or by any other means, the bubo, whether tonic or atonic, has suppurated, many authors advise the opening of the abscess by the lancet or by the caustic. I am convinced that in most cases

it is better to trust to nature. Indeed, I have generally found that nature rarely failed to make the opening in time; whereas the artificial opening is often made too early, that is, before the abscess is fully matured. I have further observed another advantage by trusting to the operations of nature; it is, that abscesses which open spontaneously, are more readily and more perfectly consolidated than those which are opened by incision or caustic. The latter are frequently attended with serious consequences, leaving large cicatrices, which we should always make a point of avoiding, especially in women, for very obvious reasons. If left to nature, the abscess generally opens by one or two small openings when the gland has completely suppurated, and a cicatrix is soon formed which is scarcely visible, or soon entirely disappears.

There are cases, however, in which it is necessary to assist nature, either by dilating the spontaneous opening or by making an artificial one. Some buboes likewise remain indolent, become hard, and manifest no disposition to suppurate. In such cases, especially if the patient has been neglected, the bubo becomes scirrhus, or frequently terminates in a disagreeable ulcer. To prevent this accident, recourse must be had to stimulating and irritating remedies; a large gum plaster, spread thick and applied to the indurated gland, often produces beneficial effects. In some obstinate cases, success has attended the application of a small piece of the nitrate of silver, about the size of a pea, to the middle of the indurated gland; leaving it on for two or three hours, then removing what remains, and dressing the eschar with a little ointment; afterward

applying the gum plaster, or an emollient poultice, till the tumour entirely disappears.

When the abscess has broke, a hole is to be made in the plaster, corresponding to the opening in the abscess, to afford a free vent to the pus; lint or fine sponge is to be applied to this opening, and then covered with a piece of linen or adhesive plaster. This practice is equally applicable to buboes opened spontaneously, or by art.

But it is not sufficient that a free vent has been given to the pus; it is necessary to prevent its forming sinuses or fistulas, by penetrating into the cellular texture of the groin towards the thigh. On this account the abscess should be dressed twice or thrice a-day, gently pressing from the circumference towards the centre, so as at each time to evacuate the matter; when this is not sufficient, we must endeavour to obtain this effect by compression, and a suitable bandage.

I must here remark, that the common practice of applying a large caustic to the bubo, and allowing it to remain for ten or twelve hours, with the view of inducing suppuration, is generally attended with bad consequences. Twice I have seen gangrene follow, and in other instances extensive ichorous ulcers. In one instance, the ulcer became cancerous, and destroyed the patient. Small caustics, as recommended above, I have never known to produce such inconvenience.

When, from the size of the swelling, and the violence of the symptoms, mortification is apprehended, the most active remedies must be immediately applied to prevent this dreadful consequence. On this occasion it is peculiarly necessary to ascertain the condition of the patient, and the nature of the disease, so that

we may adopt the antiphlogistic process, or employ strengthening and soothing remedies, according as the symptoms of inflammation, or of weakness and irritability, predominate.

When the abscess has been opened by nature or by art, it is termed an ulcerated bubo; in the treatment of which we must never lose sight of the distinction pointed out above, if we are desirous of not being disappointed in the event.

In such cases we are commonly directed to administer mercury both internally and externally, and to treat the ulcer as a syphilitic ulcer. This practice is unquestionably proper in many cases, but in some instances it may prove injurious, and may often give rise to very dangerous symptoms.

No general plan of treatment can be prescribed for ulcerated bubo. The physician must be directed by the nature of the disease, and the constitution of the patient. If the patient is of a strong constitution and free from fever; if the pus is bland and of proper consistence; if the ulcer appears to require no peculiar topical application;—it may be dressed with lint or sponge, as recommended in the treatment of syphilitic ulcers, so as to facilitate as much as possible the discharge of pus; and if any hardness remain, the poultice which favoured the suppuration, will advance the cure more than any other remedy.

If the administration of mercury is deemed proper, frictions may be made on the affected side, or the mercury may be given internally, both to heal the ulcer, and to eradicate the virus absorbed from the ulcer.

I have seen many ulcers of this kind cicatrize readily, without any means being adopted for the cure, with

which I was much surprised when I first began to practise; for the inflammation, suppuration and ulceration were evidently the effects of the syphilitic virus. I could not account for the mildness of the symptoms, but on the supposition that it was owing to a few frictions, which I had prescribed to my patients in the beginning of the disease, in order to discuss the bubo; and that a small portion of the mercury had entered the gland, and destroyed the virus, though too late to prevent suppuration. The mercury should be continued for some time after the ulcerated bubo has healed, provided that the nature of the bubo and the constitution of the patient do not forbid. Some practitioners have thought, that mercury, applied to the ulcerated gland, might be useful; but in this we must act with caution, lest we occasion a disease worse than the original complaint; of which I have seen many melancholy instances. A single case will serve to illustrate this.

A young physician, with whom I am acquainted, of a healthy strong constitution, was attacked with a bubo caused by the absorption of the syphilitic virus from an ulcer of the gland. The inflammatory symptoms were very violent; the abscess burst by a small opening; the suppuration continued longer, and in greater quantity, than was to be expected from the regular use of mercury. Having become impatient, he one day took of the solution of mercury in gum arabic, which he had been using internally, and hoping to expedite the cure, he injected a small quantity into the abscess produced by the buboes. A dreadful inflammation followed, which ended not only in a mortification of the affected gland, but of all the inguinal glands

of that side, extending under Poupart's ligament; all these parts, together with the skin, sloughed away, and the patient's life was saved.

There are other kinds of ulcerated buboes, which practitioners have entirely neglected, or to which they have not paid sufficient attention. Sometimes the abscess, instead of healing, remains in the same state, notwithstanding the continued use of mercury; or it becomes soft and flabby, discharging a copious or thin ichorous matter. The health of the patient, instead of improving, grows daily worse. These circumstances require all the skill and attention of the physician: it is wrong to ascribe the present symptoms to the inefficacy of the particular preparation of mercury which has been employed, and consequently to resort to another, unless the case is very obvious; a different treatment ought rather to be adopted; better to take the hint from nature, and no longer persist in the use of a remedy which has produced no good effects. To the ulcer an injection of a solution of the sulphate of zinc, or of the sulphate of copper with camphor, or according to circumstances a fomentation with cinchona, will often be the application required; and the sore should be covered with fine lint, or a piece of soft sponge, that the matter may freely discharge, and the dressing may be retained by a strip of adhesive plaster. In such cases, large doses of opium have afforded great benefit. To prevent excoriations on the thigh from the acrid discharge of such an ulcer, the application of a little white cerate to the surrounding parts will be necessary. The decoction of sarsaparilla, with the black sulphuret of antimony, or powdered sarsaparilla in milk, or lastly, the decoction of cinchona in milk, if milk agrees with the patient's

stomach, should be administered internally. If these remedies do not effect a radical cure of the ulcer, as sometimes happens, they will at least strengthen the patient, and thus enable him to bear the further use of mercury if deemed necessary, as is sometimes the case, and will moreover facilitate the healing of the ulcer. In ulcers of this kind, commonly termed phagedenic, great advantage has been sometimes observed from the external application of the solution of the sulphate of copper, or the use of a tight bandage; a method which has been adopted with great success in ulcers of this kind which affect the legs. In some cases, the internal use of opium has proved beneficial; in others, a decoction of the bark of the daphne mezereum. The patient should be directed to use a nourishing diet, with generous wine; to select a healthy situation in the country; to take moderate exercise, and the natural or artificial sea-bath. The following observation will serve to illustrate these remarks. An ulcerated bubo was treated according to the usual routine, as syphilitic, by the internal and external use of mercury. In the course of two months, the patient by this method was reduced, and the ulcer assumed so bad an appearance, that it was thought proper to take the advice of another physician, and I was consulted. I found the ulcer in a state of atony and relaxation. My opinion was, that the mercury disagreed with the patient; and that he required strengthening remedies, with nourishing diet, and wine. The majority was against me, and they attributed the bad state of the ulcer to an improper preparation of mercury; and they concluded on continuing the mercury, but in a different form. The ulcer grew evidently worse by this treatment. At length, I prevailed on them to try, only for eight or

ten days, what I had proposed in the beginning; and the patient, finding himself the better for this treatment, continued it for some weeks, when he was perfectly recovered.

A similar case occurred some years ago to a friend of mine in London, who gave the same advice to a patient that had been treated for a long time with mercurials; and the patient found the same benefit from the change. A remarkable circumstance which happened with this latter patient, I must take notice of. Under the course of mercurials he suffered violent sweats every night, for which he put on every morning a clean shirt made of new linen; all these shirts, about a dozen in number, after having been washed once or twice with other linen in the common manner, grew so tender, that they seemed to be perfectly rotten. It would have been very interesting to have examined the sweat chemically.

Dr. Osborn has communicated a very singular and instructive observation of this kind. A man was affected with two buboes, which ulcerated; one healed, the other assumed a cancerous appearance, and destroyed the neighbouring parts as far as the anus. Every thing that was tried, failed. At length he went home to Edinburgh, where they prevailed on him to leave off drinking water, which had hitherto been his only beverage, and to eat what he pleased, and to drink good wine; by this course he was perfectly cured in three weeks.

The ichorous ulcer of the inguinal glands, is sometimes accompanied by symptoms of scrofula; in such cases probably the external application of cicuta, with sea-bathing, have been found beneficial. The muriate of lime recommended by Fourcroy, (in the Memoirs of

the Royal Society of Medicine in Paris), deserves our attention in such cases; as likewise the muriate of barytes, recommended by Crawford.

In obstinate ulcerated buboes, accompanied by symptoms of scurvy, the juice of oranges and of lemons given freely, and the decoction of malt, or the juice of antiscorbutic plants, have been employed with success.

The sinuses or fistulas, which sometimes occur after such ulcers, are for the most part easily prevented, as well by proper lotions, as by a suitable posture of the patient when in bed, and by a gentle, but careful pressure, squeezing out the matter all round every morning and evening, and by applying a tight bandage.

If sinuses, or fistulas, are formed in the neighbourhood of an ulcerated bubo, and do not yield to the injections mentioned in Chapter XI., or tight bandage, the knife must be employed. These complaints, however, seldom or never occur, if the surgeon, in order to give a free discharge to the matter, is attentive to the posture of the patient; if he dilates the opening in time, and dresses the ulcer in the manner indicated in the preceding chapter, and the patient comply exactly with his directions.

The bubo sometimes opens, while a portion of the gland remains hard and swelled. This will be effectually cured by repeated cathartics, and by the application of the remedies recommended for indurated buboes; as frictions with the muriate of mercury in saliva, or with mercurial ointment, on the affected part, and the gum plaster. Lint dipped in oil of turpentine, and applied to the indurated gland, is sometimes very efficacious. The same remedy frequently succeeds in ichorous ulcers.

If the ulcer looks healthy, dry lint and common poultice will remove all the swelling.

Buboes sometimes becomes gangrenous, from the violence of the inflammation, but more frequently from improper treatment, or because they have been opened too early, especially in irritable constitutions or scorbutic habits. The foul air of hospitals contributes to this effect, and frequently proves fatal to such patients. Mercury in such cases induces or increases the mortification, though the cause of the disease was originally syphilitic. Large doses of opium and the cinchona administered internally, and the cinchona alone, or camphor dissolved in vinegar applied externally, are the most effectual remedies. The powdered root of the *arnica montana*, applied externally, ought to be tried in these cases.

The *cicuta*, both internally and externally applied, has been highly recommended for cancerous buboes; but fortunately these cases are rare. I have never seen a radical cure produced by this remedy, where there was a genuine cancer; though there is nothing to hinder its being tried: but in such cases the only method that I know for warding off death, or at least preventing a most miserable existence, is the total excision of the cancerous gland, if practicable, and this not be too long deferred.

An ulcerated bubo, supposed to be cancerous, was some years ago cured in London by the juice of six lemons, given for several days in succession.

We must be careful to distinguish inguinal bubo from hernia at the abdominal ring. In the former, the tumour is soft and yielding, and the protruded parts may be returned into the abdomen; while the bubo remains fixed. We must likewise not confound with a

bubo, or hernia, the testicle which remains in the groin without descending into the scrotum. I saw a mistake of this kind which nearly proved fatal to the patient.

CHAPTER XIII.

Of Syphilitic Excrescences and Rhagades.

THE warty or condylomatous excrescences which appear on the genital organs of both sexes, and especially at the anus, were all known to the ancients. We find them described by the Greek, Latin, and Arabian writers, under the name of Ficus, Thymus, Porrus, Condyloma, &c.

Though these complaints are now ascribed to the syphilitic virus, I cannot subscribe to this opinion, being persuaded that the same causes which produced these complaints in the earlier ages, must operate, and frequently produce them in the present time. A depraved and an unnatural appetite is among the most frequent causes of these diseases, especially when seated at the anus.

The reasons which have induced modern practitioners to pronounce that all these excrescences are syphilitic, appear to me to be founded on the same general principle, which led them to consider as syphilitic all or most of the diseases of the genital organs. I think I have

demonstrated the fallacy of this principle, which will be rejected in proportion as more attention and new light are directed to the treatment of all these complaints. They rest their opinion on this observation, that these excrescences are cured by mercury; but there are many diseases that are not syphilitic, which are completely removed by mercury. Besides, I have more frequently observed that these excrescences resist mercury, while they yield to other remedies. Finally, I repeat that these complaints were not unfrequent among the Greeks and Romans.

But whether these complaints originate from the syphilitic virus, or proceed from other causes, I consider them generally as mere local diseases, and consequently they readily yield to topical remedies.

Sometimes, however, they are owing to a syphilitic infection of the system; at other times they are complicated with the virus, and then, besides topical remedies, they require a course of mercury.

The term condyloma is derived from the Greek *κονδύλη*, tuber seu tumor exictu: our attention ought consequently to be directed to the origin of the disease. The condyloma is a solid indolent protuberance, or excrescence, commonly observed about the anus in both sexes; more rarely at the external labia and the orifice of the vagina in females, or on the penis in men.

This fungous spongy excrescence is of an irregular figure, sometimes small, at other times of considerable size, distilling from the surface a fetid ichor. The condyloma is sometimes very hard, but in general it is less so than cartilage and firmer than flesh.

By the moderns, this disease is often confounded with chrySTALLINE ampulla, or transparent acineform excres-

cences, which they have considered as a variety of the condyloma.

The immediate cause of condyloma is an inflammation of the mucous or cellular membrane, with an extension of its texture.

The causes of this inflammation are friction, pressure, external violence, or an erosion of the parts produced by the syphilitic virus, or any other acrimony.

They should be distinguished, 1. From varices of the hemorrhoidal vessels projecting from the rectum, and from varicose tumours which sometimes affect the nymphæ in women. 2. From the extravasation of blood in the cellular membrane round the anus, often accompanied by an extensive excrescence of the mucous membrane, commonly termed *cristi galli*, *cristi ani*, or *marisca*. 3. From warty excrescences termed thymus, ficus, verruca, porrus, myrmecion.

The thymus, or thymion, of Celsus, is an excrescence or wart, having generally a small base, the body being large and indurated, and the surface very rough. On the apex there is frequently a fissure discharging blood. The thymus is generally about the size of a bean, sometimes smaller, rarely larger, and appears, according to Celsus, on different parts of the body, but particularly on the palms of the hands and soles of the feet. The most dangerous are those which affect the genital organs, and which bleed readily. It appears, that the ancients gave the name from the resemblance in colour to the flower of thyme. It is likewise often called *ficus*, or *sycoma* seu *sycosis*, from the Greek Σῦκον, a fig.

By verruca, we generally understand an excres-

cence, possessing more or less hardness, and a rough surface.

Porrus, or myrmecium, is a warty excrescence on the genital organs, sometimes moist, sometimes dry, and painful to the touch. When it is nearly of the size and figure of a mulberry, it is termed a cauliflower excrescence, from the resemblance to this vegetable. The term is more applicable, when there are many united in one groupe.

All these different excrescences, appear to me to be mere varieties of the same species.

I must remark, that an acid acrimony is a frequent cause of the complaint, when it attacks the genital organs of children.*

* I have already stated, in Chapter IX., that warty excrescences or caruncles, situated in the urethra, were sometimes the cause of dysury in men, but that this cause appeared to me to be very uncommon. I have lately seen a young man, who had a considerable excrescence of this kind near the orifice of the urethra; it could be distinctly seen by dilating the mouth. This wart came on after a blennorrhagia. I must observe that in cases of urethral dysury, it is necessary to examine whether the patient is subject to warts in other parts of the body: for I am induced to believe, that we may reasonably suspect the same cause to exist in the urethra; especially if we have employed bougies a sufficient length of time without effect.

If these warty excrescences, or caruncles, in the urethra, are in sight, the caustic may be applied; but when they are situated higher up, this method is liable to much inconvenience; nevertheless, it deserves to be tried, as nothing else remains than cutting into the urethra, and then extirpating the wart, either by the caustic or bistoury.

Method of Cure.

Celsus recommends the application of vegetable and mineral astringents, and principally of the green oxide of copper, and of caustics or escharotics, in indurated and inveterate condylomata; in those which resist these means, he advises excision, or the actual cautery.

Though the extirpation by the knife, or by the ligature, frequently succeeds, I prefer the application of the caustic; for this purpose I have used with success the nitrate of silver, or the oxygenated muriate of antimony; in other cases I employ the liquid nitrate of mercury, or the red oxide of that metal.

Sometimes, these excrescences disappear by the frequent application of cold water, by means of a brush, or of water mixed with the tincture of myrrh, and camphorated alcohol, and then covering the part with compresses dipped in the same fluid. The juniperus sabina in powder, alone or mixed with burnt alum, or the yellow or red oxide of iron, is a very powerful remedy.—For many years I have used, with great success, a composition recommended by Plenck, which I have inserted in the Pharmacopœia syphilitica, under the title of liquor ad condylomata. In other cases, a solution of the muriate of iron in alcohol, has succeeded perfectly well. Sometimes a mercurial course is necessary, as has been already stated, and then these excrescences disappear very rapidly; but sometimes they obstinately resist these means, or return soon after they have disappeared, in which case extirpation by either of the means indicated above will be necessary.

Mercurial fumigations have produced the desired effect in some obstinate cases.

The porri, and particularly the cauliflower excrescences which occur round the glans penis, are often very obstinate. If they have a peduncle, they may be removed by excision, or by the ligature; and after they have fallen off, touching the part with caustic, so as to destroy the roots: at other times we succeed better by first softening the surface with mercurial ointment, or with emollient cataplasms, and then applying the carbonate of potash or of soda, or the tinctura muriatis ferri, or the liquor ad condylomata, ph: syph., or the caustic, or some astringent. The application of a solution of opium has been lately recommended. Obstinate cauliflower excrescences round the glans, have been sometimes cured by frequently plunging the affected part in an emollient decoction, and then covering it with the gum plaster. I have enumerated all these means, because these excrescences often put our patience to the test.

The same treatment is equally applicable to other warty excrescences; when we employ escharotics, care must be taken to defend the surrounding parts, otherwise they will be liable to ulcerate.

SECTION II. *Of Rhagades, or Fissures.*

Rhagades, or rhagadia, from the Greek *ράγας* vis, impetus, or *ῥάγας*, ruptura scissura, rima, are fissures in the skin at the anus, or on the labia externa, or on the palm of the hand.

Celsus recommends the warm bath, with lime water, general and topical; boiled eggs, applied warm; mucilaginous, oily and emollient remedies. I have found the butter of the cocoa, and sometimes the ointment with the nitrate of mercury, or the common mercurial ointment, preferable to all other topical applications. I have at this time under my care, a patient who, about eighteen months ago, caught a clap, during which condylomata appeared at the anus. He went through a course of mercury. The condylomata disappeared under the use of the mercury, but the running from the urethra has continued ever since. Large rhagades supervened on the palms of his hands; and I am certain that neither the gonorrhœa, nor the condylomata, nor the rhagades, with which he is affected, are owing to the syphilitic virus. The condition of this patient is well described by the Roman authors, and has been radically cured without mercury. But there are cases which require a full course of mercury.

Having treated of the effects of the syphilitic virus on the organs of generation, I shall next treat of its effects on the general system.

CHAPTER XIV.

Of Syphilis, or the Syphilitic Disease.

SYPHILIS, derived from the Greek words σῦς, a hog, and φιλία, love, signifying an impure or foul connection, commonly termed the pox or venereal disease, is an infectious disease, propagated only by immediate contact, and most commonly by coition. The specific virus termed syphilitic, generally occasions ulcers, blennorrhagias, and other sensible effects on the surface of the body to which it has been applied, before it produces that assemblage of symptoms designated by the name of Syphilis. From thence it appears that it is absorbed in a longer or shorter time into the system, and then produces in different parts of the body particular symptoms characterizing the disease, as ulcers in the throat; red or brown spots on the skin; pustules, principally near the hairy scalp, readily changing into scabby ulcers; pains in the bones; thickening of the periosteum or tumours; and finally, caries in the substance of the bones, particularly of those which are not covered with muscles.

All these symptoms rarely occur together in the same person at the present time; it is their combination in greater or less number, which constitutes what is properly denominated syphilis, or syphilitic disease, venereal disease, or pox.

These symptoms are the effects of a peculiar acrimony, a specific animal poison or virus, sui generis, commonly termed venereal or syphilitic virus.

The virus is communicated, at the present time, in Europe at least, as I have stated, solely by the immediate contact between an infected and a sound person; that the infection may take effect, the application of the matter imbued with the virus must generally be continued for some time on the healthy surface of some part of the human body.

This communication most generally occurs in the union of the sexes; and the genital organs being most exposed to the contact of the virus, they generally experience the first effects, and are the original seat of the first symptoms.

These local symptoms are, in both sexes, blennorrhagia, or small corroding ulcers on the genitals, spreading gradually, and frequently followed by tumefaction of the inguinal glands. After one or more of these phenomena have occurred, during an indefinite time, there commonly supervenes ulcers of the tonsils or throat, spots or pustules, mostly of a brown or dark red colour, on different parts of the surface of the body, but particularly on the breast, on the forehead near the roots of the hair: these pustules are early covered with a yellowish scab, and often degenerate into ulcers. If these symptoms are neglected, or injudiciously treated, the virus attacks the bones of the palate and nose, or it occasions pains, nodes, and caries of one or more of the bones, especially in the os frontis, tibia, sternum, clavicle, &c. This is the course which the syphilitic virus generally takes at the present time: sometimes, however, we observe that the virus produces from the first a swelling of the inguinal glands, without being preceded by blennorrhagia or ulcers, or any visible affection of the genital organs; and sometimes, though more

rarely, the virus is absorbed and carried into the system, where it produces the effects just stated, without previous blennorrhagia, ulcers, or swelling of the inguinal glands.

I have stated, that in coition syphilis or the venereal disease is most generally propagated at the present time; nevertheless, it often happens, that when other parts of a sound person are exposed to the contact of the virus lodged in some part of an infected person, the virus first exerts its action on this sound part; then, commonly after having produced an ulcer, it is conveyed by the absorbent vessels into the blood, when it shows itself by the symptoms described above. It likewise frequently happens in this case, as in the other, of which I have seen many instances, that the virus is absorbed into the system without having excited the slightest disease on the surface of the body; and it then manifests itself for the first time.

The next most frequent mode in which the infection is communicated, is the contact of the fingers or hands with an infected part, especially when affected with any accidental wound, or excoriation. Surgeons and accoucheurs unfortunately present too many examples.

In all these cases, we observe, that to occasion this infection, it is generally necessary that a sound part should be in contact with the virus of syphilitic blennorrhagia, or ulcer.

A no less frequent mode of infection is by the mouth; in this way many infants are infected by their nurses, and many healthy nurses receive the infection from the children. The nipples, in the latter instance, are the most frequent seat of the disease; though the pox is some-

times communicated by the mouth of the child and nurse reciprocally, as happens in adults.

Some of the modern writers have asserted, that the syphilitic disease may be contracted by lying in the same bed after an infected person. But from the most attentive observation, this never, or but rarely occurs, especially among grown persons; we never see the nurses infected in the hospitals, when they are constantly with persons going through the different stages of the disease. The fact is, that syphilitic patients are liable to be deceived, or rather they are disposed to impose upon the physicians and surgeons; and the most absurd and improbable opinions respecting the manner of propagating the disease are readily adopted, especially by the herd of mankind, always prone to credulity. Hence the notion so prevalent in France, that this disease may be contracted by going to the necessary after an infected person. Hence the abominable filthy practice so common in all the privies, both in town and country, throughout France. Nothing, however, is generally more unfounded; and if such cases really exist, of the patient receiving the disease in this way, they are so few as not to deserve notice. I will not deny, that a man going to the necessary after one who has some syphilitic affection of the genitals, and rubbing his penis against the seat, may contract a syphilitic blennorrhagia, or ulcer of this organ. Hence the ridiculous stories told in every country, by monks and soldiers, of the manner in which they became infected with this disease.

Nevertheless, the following fact which came under the notice of one of my friends in Edinburgh, in 1787, shows that the infection may sometimes occur in this unusual way.

He was consulted for two young ladies, with whose parents he was intimately acquainted, being the family physician. The elder was aged twelve years, the younger ten: both were affected with ulcers and tetter on different parts of the body, without any disease about the genitals. The complaint had but lately been observed by the mother. My friend suspected instantly that the eruption was venereal; but knowing in his capacity of family physician for many years, that the father and mother were perfectly healthy, and that they never had been affected with the venereal disease, he made very particular inquiries; and learning that the two girls were perfectly innocent, and that from the mother's report they were free from any local venereal affection, he inquired if they had never slept with an infected person. The mother replied, that they had always slept by themselves till lately, when they occasionally slept with the maid, to whom they were much attached, and who appeared to be in good health. The woman was called, and interrogated in the presence of her mistress, whether she was not diseased; whether she had no disorder of her skin. She roundly asserted, that she had none. My friend communicated his suspicions to the mother, who insisted on the woman being stripped in her presence. Scabby spots of an unequivocal character were discovered on different parts of her body; and on examining more particularly her head, she was found to have a complete corona veneris. The woman decamped without being heard of; the two children were put upon a course of mercury, and were cured in a few weeks.

This fact evidently proves that, even now, syphilis may be communicated sometimes by the mere contact

of the naked body, independent of copulation, especially in young persons, whose skin is very delicate. The same remark has been made by Sydenham: he states, that he had observed more than once, children diseased by sleeping with their parents who were infected; he adds, with his usual sagacity, that children sleeping naked with an infected person may contract the disease; though adult persons, whose skin is rendered less sensible by age, can scarcely be infected by merely lying together without copulation. The case is very different with children, whose tender skin readily receives the infection in this way.

Another very important question, which for a long time I could not venture to decide, is, whether the syphilitic disease can be propagated to children by the act of generation; or to speak more correctly, whether an infected father can communicate the disease to the foetus by the semen in the act of copulation; or whether an infected mother having no disease about the genital organs, is capable of communicating the virus to the foetus in utero, through the medium of the circulation.

A remarkable case, which occurred some years ago in London, will elucidate this question, and show that the disease may be communicated by the semen from the father to the child.

A dragoon in the king's guards, was affected with an ulcer in the throat, which resisted the mercury for a long time. While under treatment he cohabited with his wife, who never had any syphilitic complaint, and who continues in perfect health. The child which was the fruit of this connection, was attacked a few weeks after its birth with a syphilitic ulcer in the throat, in

the same place where the father was affected. I have seen the father and son; both are now perfectly cured.

I know a family now living in Europe, in which all the children are born with the germ of the disease, of which they all died, till the mercury was administered to the she-ass that furnished the milk with which the last one was nourished.

This decides the question as regards the father: but notwithstanding all the pains I have bestowed on the inquiry, I have never discovered a single well authenticated fact, showing that the virus can be communicated by the mother to the fœtus in utero.

The infected children which have come under my notice, or which have occurred to the observation of some of my friends, who are in the habit of seeing new born children, seem rather to prove the negative. Neither I, nor my friends, have ever been able to discover ulcers or other evident marks of the syphilitic virus in infants at the moment of their birth; and we may suppose, with a sufficient probability, that those which appear at the end of four, six, or eight days at the farthest, after birth, on the privates, anus, lips, &c. of these infants, as likewise the runnings from the genitals and eyes, sometimes observed in them, proceed from the infection communicated to them in their passage through the vagina of the mother, by the ulcers existing in that part; for the skin in infants is then nearly as tender as the red surfaces of the body, to wit, the glans, lips, &c.; and this, unquestionably, is the most frequent case in which the immediate absorption of the syphilitic virus takes place.

Another very important question remains to be decided, whether the syphilitic virus absorbed into the

system can infect any other fluid than the gelatinous or albuminous part of the blood; and finally, whether it infects the milk, and consequently, whether the infection can be communicated from the mother or nurse to the child, through the medium of this fluid.

From what I have stated, the different ways in which the syphilitic virus is now propagated among us in Europe, from an infected to a sound person, may be reduced to the following:

1st. The copulation of a sound person with one evidently affected with blennorrhagia, or syphilitic ulcers on the genitals: this is the most usual way.

2d. The copulation of a healthy person with one who is apparently sound, but in whose genital organs the virus is lodged, though it has not yet produced any evident symptoms. Thus a woman, who has received the infection from a man, may for several days infect one or several men, though she has no symptom of the disease; et vice versa, a man may infect several women in the same way. We frequently meet with such cases in the large towns in Europe.

A case lately occurred to me, which might induce a belief that the virus is sometimes communicated and propagated, though the genital organs are nowise infected. A physician, a friend of mine, was attacked with syphilitic symptoms, for which he took mercury. All the symptoms were removed, and he appeared to be in perfect health for six months, when he had connection with a woman to all appearance sound; she became infected a few days after. Both were persuaded that the infection proceeded from him; for two days after, he had a bubo, without having any local disease on the genitals. If this observation were well attested, which

it appears not to be, or if it were confirmed by similar facts, it would prove very instructive, by demonstrating three circumstances relative to the syphilitic virus: 1. That it may remain six months in the body without exhibiting the least sign of its existence: 2. That it may be communicated, though the genital organs of the infected person are not diseased: 3. That this poison sometimes infects the blood in the inguinal glands, though we cannot readily determine how it happens. But I am far from drawing any conclusions from an insulated fact, the only one of its kind which has come to my knowledge, and which is likewise very equivocal; for it appears to me that these symptoms might have been produced by the immediate absorption of the virus, latent, or dormant in the vagina of the woman, who was apparently in the soundest health.

3d. Lactation. In all the instances of this kind which have come to my knowledge, either the nipples of the nurse being infected by the syphilitic ulcers in the mouth of the child; or vice versa, the nipples of the nurse being affected with syphilitic ulcers, produced ulcers of the same kind in the mouth, nose and lips of the child, and this communicated the infection to its system. It is still doubtful, as I have already remarked, whether the syphilitic virus is ever communicated by the milk.

4th. By exposing any part of the body to the contact of the syphilitic virus, by kissing, rubbing or handling. The danger is increased, if the part exposed has been previously excoriated, wounded, or ulcerated. There are many instances, especially in large towns, of nurses affected with syphilitic ulcers in the mouth, who have communicated the pox to children by kissing. I have

already stated, that the syphilitic disease was communicated to two children who were in the habit of sleeping with a servant woman who had a concealed syphilitic disease of her skin; and I have likewise given the history of a remarkable case of infection communicated by the mere friction of the genitals of a man on the privates of an infected woman. (see Chapter XI.) We frequently see syphilitic ulcers which occur in this way, on the scrotum and thighs. I have seen more than one unfortunate instance of the virus being communicated to the hands of midwives and surgeons; and vice versa, I know an instance of a midwife having the syphilitic eruption on her arm, who has communicated the pox to more than an hundred women.

5th. By wounding any part of the body with a lancet, or any cutting instrument, infected with the syphilitic virus. In this there is a resemblance to the virus of small-pox. We have many instances of the variolous poison communicated in bleeding with a lancet employed for inoculation, or opening of variolous pustules. Van Swieten records several cases where the syphilitic disease was communicated in a similar manner, for want of sufficient attention in cleaning the instrument employed for bleeding and scratching. In Moravia, in the year 1577, many persons went into the bath, where, according to the custom of the times, they were cupped by the barber, and were all infected with syphilis. Crato, a physician in Jordan, who gives the description of the disease, is of opinion, that it was communicated by the instrument employed in the scarifications.

6th. By transplanting of teeth. I witnessed a melancholy instance: a young lady, in London, had a decayed tooth extracted, and its place immediately supplied by

a tooth taken from a young woman apparently healthy. She was soon affected with an ulcer in her mouth. The disease appeared to be syphilitic, but so obstinate, that it resisted the most powerful preparations of mercury, and occasioned a caries of the jaw, followed by the most frightful destruction of the mouth and face, and which finally terminated her existence; and this without the slightest indisposition in the woman who furnished the tooth.

7th. By the act of generation. I long entertained doubts, whether the virus was ever actually propagated in this way, independent of any local disease of the genital organs; but the fact already cited (and others might be adduced) prove undeniably, that a father infected with syphilis may communicate the disease to his children through the medium of the semen, though his genital organs are perfectly sound. In this way, undoubtedly, syphilis is sometimes propagated from generation to generation, and becomes an hereditary complaint. In order to explain the apparent contradictions respecting the propagation of syphilis, which sometimes occur in practice, and to assist the judgment of the young practitioner in doubtful and difficult cases, I will add the following remarks.

1st. The syphilitic virus may be absorbed and conveyed into the mass of blood, and produce a general infection, without occasioning the least visible effects on the surface of the body; hence it is of primary importance in practice, that we should constantly bear in mind, that the absorption sometimes occurs before the slightest symptoms appear on the external parts; that consequently the circulating mass may be infected, before the effects of the virus have appeared on the geni-

tals, or without these organs having been in any degree affected.

2d. A man or woman, having the syphilitic virus lodged in the genitals, may communicate the infection in the form of blennorrhagia, or syphilitic ulcer, without having the slightest appearance of the disease, either on the external organs or in the system. Fully to comprehend this paradox, we must recollect what has been already stated, that the syphilitic virus, applied to any part of a sound person, must adhere for some time before it can produce any apparent effect, that is, a blennorrhagia or ulcer; but if it is removed in time, either by chance or by attention to cleanliness, it will produce no effect in the part, or if removed during coition with a healthy person, before it has had time to act on the part where it was lodged, the latter person may receive the infection, and contract the disease, while the former remains perfectly sound. Such cases occur pretty frequently in practice.

3d. It is often observed, especially in the large capitals of Europe, that men cohabiting with a particular woman enjoy good health without contracting any disease, while a stranger who has a connection with the same woman, shall receive a violent infection.

Though every part of the body appears susceptible of receiving the infection, the syphilitic virus is observed however to affect some fluids, and some parts, in preference to others. It rarely, or perhaps never affects any other lymphatic glands than those of the groin, axilla, or fore-arm. It sometimes produces a coagulation of the lymph, and swellings of the absorbent vessels of the genital organs; but it principally attacks the mucous glands of these organs, and likewise

of the throat in both sexes; it corrodes or destroys the gelatinous part of the bones, and of the roots of the hair, producing baldness (*alopecia syphilitica*); in some ill-treated and inveterate cases it attacks the nails of the fingers and toes, destroys them, and occasions them to drop off: it is in such cases, probably, that it produces, in warm climates, the black leprosy (*Leontiasis* or *Elephantiasis*) a very loathsome disease, in which the body is covered with ulcers, the corroded limbs drop off, and the unfortunate person presents the most hideous aspect. Happily for man, an efficacious and radical cure has been at length discovered for this dreadful disorder.

When the symptoms are characterized according to the foregoing description, and when many are combined together, there will be no difficulty in pronouncing on the nature of the disease; but the syphilitic virus does not always produce such well marked symptoms, and then it is sometimes very difficult, and even impossible, to distinguish syphilitic complaints from diseases proceeding from other causes. Such cases often require the nicest discrimination on the part of the physician. In doubtful cases, the genital organs must be examined, to discover whether there are any vestiges of former ulcers, or whether there is any swelling or hardness of the inguinal glands.

The syphilitic infection is communicated to the system in two ways: the first, and most usual way, is, when the syphilitic virus, after having been communicated by the union of the sexes, and having produced blennorrhagia, ulcer, or bubo, is conveyed, during the course of the disease, into the blood, by the absorbent vessels; the other, which is less frequent, occurs when the virus is directly absorbed, without producing any visible

effects on the genitals; or when it is communicated to the system without the union of the sexes, in the manner which I have explained above.

In the former instance, the virus, mixed with the lymph, passes into the blood through the absorbent system: in the latter, it is often communicated unmixed, directly to the blood, as in the case of a wound or excoriation; and in the latter instance, the effects are observed to be generally more violent and rapid than in the former.

Before the syphilitic virus, existing in the system, produces eruptions on the skin, or other visible effects in the body, the patients are frequently affected with extraordinary languor and prostration of strength: sometimes they experience erratic pains in every part of the body, and darting pains through the cylindrical bones; frequently there is pain in the pericranium, as if the head were forcibly compressed. When these pains are not very violent during the night, they merely occasion restlessness and uneasiness: they are very different from the excruciating pains which attack the cylindrical bones in a confirmed syphilis, and which occasion a thickening and swelling of the periosteum, or an actual exostosis, which is frequently followed by caries. The former are confined to the periosteum, or to the surface of the muscles, aponeurosis or ligaments; and are sometimes so light as scarcely to excite a complaint, and when more violent, they are more tolerable than the latter. Besides these symptoms, the patients are affected often with weakness and lassitude, not only when up during the day, but especially in the morning when they rise; they find no rest nor comfort while asleep or in bed. They have a slow fever, with a frequent weak pulse, the

eyes sunk, the circle round the eyelids livid, and pains in the shoulders and sides: the countenance shows that the constitution is undermined: in a word, the patient sensibly wastes away.

These symptoms frequently precede the appearance of ulcers in the throat, and eruptions on the skin; the more general the eruptions, the greater the remission of pain, and the more sensible the diminution of the other symptoms which we have described.

The skin then acquires a brown colour; spots of a reddish purple, yellowish, or livid colour, appear on the breast, shoulders and forehead; sometimes these spots are small, distinct, and circular; sometimes large and spreading; and frequently they are covered with a dry furfuraceous crust like tetters, especially at the roots of the hair on the forehead, cheeks, and neck; sometimes they are converted into deep hollow ulcers. On the palms of the hands, and soles of the feet, these eruptions degenerate into hard callous fissures, or rhagades, discharging a limpid ichorous matter; the epidermis separates from the skin; circular hard callous tubercles, or slightly elevated pustules, most commonly dry, at other times moist, scaly, furfuraceous, of a yellowish colour, sometimes ulcerated at the top, appear in different parts of the body; they are commonly observed at the corners of the mouth, and the alæ of the nose. This kind of eruption is likewise frequently observed on the forehead or temples, on the hands, wrists, thighs, buttocks, and loins; in fine, they are often dispersed over the whole surface of the body.

The inflammation and ulceration of the tonsils, of the uvula, and of the palate, or of the other internal parts of the mouth, throat, and nose, are characteristic symptoms

of syphilis. These ulcers being neglected, are soon followed by caries destroying the bones of the palate. The palate is covered with tubercles and pustules, which degenerate into phagedenic ulcers, and the caries of the palatine bones soon extends to those of the nose. The pituitary membrane, when attacked with this disease, thickens and becomes callous or fungous; ulcers appear in the nose; the *ossa spongiosa*, the *ossa nasi*, and the vomer which supports them, become carious, and their destruction occasions the depression and disfiguring of the nose so frequently met with, even till within twenty or thirty years, and which has happily become very rare in Europe, or at least in France and England. The voice is altered, it becomes hoarse, the patient loses the power of articulating words, and he cannot be understood, if the void occasioned by the loss of the uvula and the exfoliation of the carious bones is not closed. The gums are eroded, and the teeth fall out; the breath becomes hot and fetid. As the affections of the skin and throat sometimes occur at the same time, I have thought that they might properly be described together; as likewise those of the palate which sometimes appear with them, or soon after, if the disease has not been checked in time.

These ulcers of the uvula, palate, and tonsils, have a coriaceous appearance, and whitish colour; they grow deeper, while those of the mouth have generally a greater resemblance to aphthæ. Though there is a difficulty in describing them, the experienced eye will distinguish them without being deceived. There is always a happy change produced by the administration of mercury; and I can pronounce without hesitation, that whenever the tonsils and uvula are ulcerated after a syphilitic

infection, the ulcer never heals spontaneously, but will always spread unless mercury is exhibited.

The effects of the syphilitic virus, in the system, commonly appear first in the soft parts, as the throat and skin; then on the aponeurotic membranes, the tendons, and the periosteum; finally in the bones. But this is not always the uniform course of the disease; for sometimes the bones are diseased, though the skin and throat have not been affected.

Some practitioners attending hospitals have been of opinion, that the character of the disease varies, according to the seasons, and the constitution of the atmosphere, for they have observed, in hospitals destined solely for the relief of syphilitic patients, that there was sometimes a predominance of one symptom, and sometimes of another. In the hospital of Vaugirard it has been observed, that a particular form of the disease prevailed among the syphilitic children, varying according to the season. At one time, syphilitic ulcers of the mouth; at another, ophthalmia predominated.

There has been considerable contrariety of opinion respecting the time when the symptoms of syphilis declare themselves, after the virus has been absorbed into the system; but I have remarked, that this time is so different in different persons, that it is impossible to ascertain the period. In many persons, these symptoms appear in a few days; in others, not for many weeks; and in some, many months elapse before the effects are manifest in the constitution; especially if the action of the virus has been suspended, without being destroyed, by the injudicious administration of mercury. In some cases, not frequent indeed, the virus appears to have remained in the system for years, without exhibiting

any signs of its presence, when suddenly the most unequivocal symptoms have occurred.

In many instances, ulcers in the throat, and pains in the bones, occur suddenly, without any previous indisposition; in others, we first observe great restlessness with want of sleep, erratic pains in different parts of the body, preceded or accompanied by symptomatic fever, emaciation, considerable change in the countenance, and finally by complete exhaustion of the patient's constitution. Sometimes, the disease in the bones appears in a few weeks or months after the patient has taken mercury for the ulcers in his throat, or the eruption on his skin, if this remedy has not been continued long enough to effect a perfect cure; of which numerous examples are daily met with in practice.

The ulcers of the throat, the eruptions on the skin, the pains, &c. disappear, in such cases, on the use of mercury: but, if the administration of this remedy is suspended, these symptoms return; or there appear, in the course of some weeks or months, pains and tumours of the periosteum or bones. If the patient's mouth is easily affected by the mercury, which is often the case, the practitioner must not be deterred on this account, nor desist from the use of this remedy; but should direct his attention to the choice of a suitable preparation, regulate the dose, and prescribe a regimen adapted to the condition of the system.

Berenger de Carpi is the first physician who employed mercury in the cure of syphilis; but he never divulged the practice, by which he acquired a great fortune, and we are principally indebted to Vigo and Fallopius for the introduction of this remedy.

Mercury had, however, been known and used for dif-

ferent eruptions on the skin, long before syphilis appeared in Europe. The Arabian Rhazés employed it in the form of plaster or ointment. Vigo and Fallopius at first used it after the manner of the Arabians: they applied mercurial plasters and ointments to the affected parts. But we find in their writings, that they made use of chemical preparations. The red oxide of mercury was one of the first: they then employed mercurial fumigations, and soon after lotions made with the oxygenated muriate of mercury dissolved in distilled water, which they applied to the parts affected. This practice has been lately imitated, by bathing the patient in a solution of the oxygenated muriate of mercury in warm water.

Vigo appears to be the first who attempted the internal administration of mercury in syphilis; but the physicians would not follow his example, because they observed that the remedy operated in a violent and sometimes terrible manner, without producing any permanent effects on the disease. Besides, mercury was considered then, and for a long time after, as a poison, as antimony was till lately, and arsenic is at the present time, because the manner of employing it was not known, and its use not long enough continued.

Fifty years had scarcely elapsed from the first appearance of syphilis, when the famous pills of crude mercury, called the pills of Barbarossa, were brought from Turkey, and introduced into practice. They were composed of twenty-five drachms of mercury, ten drachms of rhubarb, three drachms of scammony, one drachm of musk, the same quantity of amber, and of two drachms of white honey; the whole well triturated, and formed into a mass with the syrup of lemons. A pill, about the size of a pea, was given in the evening before supper;

but such was the dread of mercury, that the physicians scarcely dared to use this medicine internally under any form.

Sudorifics had been likewise tried with advantage in the cure of syphilis; and we find them recommended by many of the old authors.

The *Guaiacum officinale* was brought into Europe from St. Domingo in 1517; and soon after the Spaniards brought likewise from America the *smilax sarsaparilla*, and the *laurus sassafras*; plants which the natives employed in the cure of the disease.

From that time to the present day, many other vegetables, but above all a prodigious number of mercurial preparations and compositions, have been invented and recommended; with the general view, no doubt, of preserving the salutary properties of the mercury, and of correcting those which were deemed injurious. This has engaged the principal attention, since vegetables were known to be incapable of effecting a radical cure of syphilis, especially in the northern climates of Europe. Mercury has sustained its pre-eminence, and is now the sovereign remedy for the cure of this disease in every stage and degree; though it must be conceded, that in the hands of empirics it proves often a dangerous and sometimes a fatal remedy: but this must be charged to the inexperience or ignorance of the practitioner, and not to the mercury, which is always a safe and efficacious medicine, when administered with judgment. It continues to be the only remedy, on which we can with safety depend for the radical cure of syphilis; but its administration requires, in many cases, great knowledge, and extensive experience, for determining the quantity necessary to effect the cure; for selecting the preparation

best adapted to the case, and the most convenient mode of exhibiting it; for fixing the period when it should be given, or when its use should be suspended, to be again resumed, and when it should entirely cease; for regulating the diet of the patient during the course, and for preventing and radically curing all the unhappy consequences which sometimes result from its use.

Those who pretend that there is but one preparation of mercury, and but one mode of exhibiting it, which is to be preferred to all others, are, in my opinion, very inattentive, or mere ignorant quacks. The extent and seat of the disease; the rapidity or slowness of its progress; the particular structure of the part affected; the constitution of the patient; the actual condition of his health; his peculiar indiosyncrasy; the nature of the remedies employed before he consulted us; finally, the course of life he has pursued; are so many circumstances which ought to direct us in the choice of the different preparations of mercury, and in the mode of administering them. They require, on the part of the practitioner, who would satisfy his own conscience and secure the confidence of his patients, an attention more serious than is commonly believed.

A modern writer has lately advanced, that a mercurial disease must be produced in the constitution of the patient by the mercury, such as great debility, a putrescence of the fluids, a kind of scurvy, without which the syphilis cannot be radically cured.

The merits of this hypothesis, respecting the action of mercury in curing syphilis, I leave to be decided by the discernment and judgment of others. I allow that mercury produces such effects on the system, but that these effects are necessary for obtaining the cure, and

that we cannot expect a radical cure without them, is a problem which attentive and scientific practitioners may resolve, after reiterated observations; for my part, I do not consider this condition of the patient as indispensably necessary for the radical cure of syphilis. I will at the same time remark, that in warm climates syphilis is often cured by a decoction of guaiacum or sarsaparilla. Guaiacum was the only remedy known by the American aborigines for the cure of this disease. The root of sarsaparilla and sassafras have been used with success in syphilis, but certainly neither these roots nor the guaiacum produce these salutary effects by occasioning debility, or a putrescence of the fluids.

For the radical cure of syphilis the same author considers it necessary to keep up a constant ptyalism, and consequently insists on the patient keeping his room, and avoiding the open air. This assertion, like many others in medicine, does not deserve attention; for it is to this custom of confining the patients to the chamber, and of keeping up a constant salivation, that the dangerous and often fatal aggravation of syphilitic ulcers is to be attributed.

In wet weather and in a cold season, it is undoubtedly proper and sometimes even necessary to confine the patients, or at least to keep them very warm: but this is not, as the author advises, to excite by means of the mercury a putrid diathesis or a general debility, which he considers as essential for the cure; it is rather to prevent the bad effects of the mercury, which may, and often do result from suppressed perspiration, such as tetanus, paralysis, &c., or sometimes to prevent the irregularities of the patient. This precaution and the one respecting diet are particularly necessary in those

countries where men are addicted to drinking, and where the effects of a cold and moist atmosphere are most to be dreaded.

At the beginning of the treatment it is proper to inform persons accustomed to drink a good deal, that if they do not live temperately during the use of mercury, they must expect a long and tedious cure, and that they have reason to apprehend bad effects from the mercury. Excess in wine, and cold and wet weather, or a current of air, must be carefully avoided during a course of mercury.

It is impossible to offer any general rule for determining how long the use of mercury ought to be continued, and the period when it ought to cease, especially in cases of great debility, or where the disease is inveterate and accompanied by ulcers, nodes and caries of the bones. The ulcers and caries grow worse, and even sometimes prove mortal under the continued use of mercury. In such cases an alterative course is our only resource, notwithstanding what has been asserted to the contrary; for we are frequently obliged to abandon the use of mercury and to administer tonics before the virus is eradicated, and when the patient has recovered his strength, to resume the use of mercury: we are even sometimes obliged to repeat this alterative course several times, and even to change the mercurial preparations till the virus is finally eradicated.

The young practitioner must not yield to the impatience of the sick, particularly of the women, and renounce too early the use of the mercury. Many patients become victims to this compliance, with which they are sure to reproach the physician; and sometimes they suffer as long as they live, the consequences of syphili-

tic complaints, which might have been averted if they had consented to the further exhibition of mercury, and if they had not abandoned it immediately on the symptoms disappearing.

We must always recollect, that it is not sufficient merely to exhibit the mercury till the symptoms or the apparent effects of the disease have subsided; but the exhibition must be continued for twelve, fifteen, and sometimes twenty days, to destroy, if I may be allowed the expression, the last particle of syphilitic virus.

I must farther remark, that when the bones are affected with exostosis and caries, the syphilitic taint may be completely eradicated, before the caries is cured, which requires the carious portion to exfoliate and separate from the sound portion of the bone, which in many cases depend on the slow operations of nature. The exostosis or hyperostosis produced by the syphilitic virus often remain during life, though the virus has been completely and radically destroyed.

I must observe likewise, that the caries may proceed from a denudation of the bone, by the destruction of the incumbent soft parts, without its being affected by the syphilitic virus, as frequently happens in the bones of the palate. This may be termed a symptomatic caries, which must be carefully distinguished from caries produced by the action of the virus on the bone.

I will conclude with observing, that ulcers in the throat, eruptions on the skin, different affections of the bones, tumours and chronic pains in the joints of the extremities, resembling gout or inveterate rheumatism, frequently proceed, though denied by some late wri-

ters, from a gonorrhœa injudiciously stopped. I have seen many striking instances; the patients, after being unsuccessfully treated for many years, were finally cured by a course of mercury.

CHAPTER XV.

General Observations on the Treatment of the Syphilitic Disease, or Confirmed Pox.

BEFORE I enter into the detail of the treatment of the syphilitic disease, or pox, I shall offer a general summary of the effects and symptoms commonly produced by the syphilitic virus, when absorbed into the system.

1st. *In the eyes.* 1. The most violent inflammation, accompanied by a discharge of puriform matter, and commonly terminating in total blindness: it proceeds from a suppressed blennorrhagia. 2. A slow and chronic inflammation of the eye, or eyelids: 3. And sometimes a fistula lachrymalis, following an ill treated blennorrhagia: 4. Or a very violent and painful ophthalmia, or a fistula lachrymalis with caries of the bones, produced by the syphilitic virus deposited from the mass.

2d. *In the ears.* Deafness, with violent pain, with or without a puriform discharge, proceeding from a suppressed blennorrhagia, or produced by the syphilitic

virus diffused through the system, attacking the ears, or the opening of the Eustachian tube.

3d. *In the nose.* Ulcers in the nostrils; an ulceration of the mucous membrane of the nose, with a caries of the bones, especially of the vomer, whence the disfigured appearance which we now and then see, though not so frequently as formerly. These symptoms are commonly accompanied by a discharge of fetid ichor, known by the name of ozæna syphilitica.

4th. *In the mouth and throat.* Ulcers, caries of the bones of the palate, or of the antrum maxillare, the erosion of the velum pendulum palati, of the tonsils, of the Eustachian tubes, sore throat, harassing cough, paraphonia, or change in the voice; the patient speaks thick, as if his tongue were too large, or speaks through his nose, or becomes incapable of articulating distinctly.

5th. *About the organs of generation.* It produces blennorrhagia, ulcers, buboes, or proves a constant source of erratic pains, excoriations, ulcers, fistulas, blennorrhæas, eruptions, porri, condylomata, rhagades, &c. Whether blennorrhagias, and swelled testicles, ever proceed from the syphilitic virus deposited on these parts, from the mass, is with me, for want of authenticated facts, still a matter of doubt, as stated Chap. I. and IV.

6. *On the skin.* Brown or copper coloured spots, scurf and scabs, especially about the hairy scalp and beard, or tinea capitis. When the disease is very inveterate, especially in hot climates, it sometimes produces the black leprosy (Elephantiasis), accompanied or followed by the loss of the nails, and the most malignant corrosive ulcers, especially on the limbs.

7th. *In the bones.* Excruciating pains and swellings, commonly called periostosis (tophus), or exostosis seated in the periosteum, or in the bone; particularly troublesome at night when the patient is warm in bed; an ulceration of the external surface, or a corruption of the internal substance, known by the name of caries and of spina ventosa. The bones the most liable to be affected with this disease, are those which are not covered by muscles, or are the least so, as the tibia radius, ulna, coracoid process, the sternum, os frontis, and the other bones of the head.

8th. Sometimes the syphilitic virus will produce effects, the nature of which is so concealed that they seem rather to arise from some other cause. Such are pains and swellings in several parts of the body, resembling those of chronic rheumatism; pains in the articulations resembling the gout, asthma, leucoplegmata, nervous or hectic fevers, pulmonary consumption, or simple emaciation, without any apparent vice in any viscus of the body. These symptoms have among physicians, obtained the name of morbi syphilitici larvati. It is, however, to be observed, that many of these symptoms are not unfrequently owing to the improper administration, and consequent bad effects, of mercury.

9th. Sometimes syphilis is really combined with other diseases; such as the scurvy, tetters, itch, scrofula, gout, intermittent fevers, or other epidemic disorders. These are called morbi syphilitici complicati, and deserve the utmost attention of the physician, because the success of the cure will often in a great measure depend on the accurate knowledge of these complaints.

Some who have written on syphilis, have stated, that when the virus is absorbed into the system, it first pro-

duces affections of the external parts of the body, as of the skin, nose, amygdalæ; that in the second stage of the disease, the complaints are more internal, and that they attack the aponeurosis, the periosteum, the tendons and bones. But the statement is liable to many exceptions; for we see cases, where the syphilitic virus being absorbed, produces symptoms in the latter parts before the former are affected, or without their having been affected.

In order to render the history of syphilis as clear and concise as possible, I shall give a short recapitulation of the different symptoms just described.

The following are briefly the characteristic symptoms of syphilis, as it appears at present in Europe.

The most common effects of the syphilitic virus on the system, are ulcers of the throat with dryness and difficulty in swallowing, and sometimes with an evident change in the voice; on the skin, spots of different sizes, which come and go, or are fixed; or dark copper coloured spots, sometimes forming pustules, containing purulent matter, without being so red or so elevated as common pustules; tetter, with an oozing of puriform matter, or dry and scurfy scabs; these scabs are at first small, gradually enlarging, forming matter underneath, and finally degenerating into ulcers. When these scabs appear on the hairy scalp, the hair drops off, and is not renewed till the disease is cured. If the syphilitic virus affects the nails, it produces a red spot, the nail becomes rough and broken, and finally drops off. These scabs and scales are sometimes confined to the palm of the hand, or sole of the foot; in many cases the whole body is covered, excepting where two surfaces of the skin are constantly rubbing against each other, as the scrotum and

thighs, the anus, the corners of the mouth, the armpits, &c.; here the skin thickens, ulcerates, and discharges a white fluid. If the virus is lodged in the periosteum, it produces swelling accompanied by the most acute pain, particularly felt at night. These swellings appear to be seated in the bone itself, for they are hard and adherent; hence they are frequently confounded with exostosis: but when the abscess is formed and it ulcerates, we generally find the bone perfectly sound. Sometimes, however, the virus affects the bone, and changes its texture; then the bone becomes enlarged, constituting what has been termed exostosis, and frequently terminates in caries. In this instance, there is an evident chemical change in the constituent principles of the bone. See Chap. XVI.

Before the appearance of these ulcers, spots, and tumours, the virus frequently excites headach, difficulty of breathing, fever, and as I have sometimes observed, exactly the same symptoms which precede other diseases of the skin. At other times, the syphilitic virus remains in the system without producing any local affection; but then it occasions a slow fever, and loss of appetite; or the patient, retaining his appetite, wastes away, with or without fever; he loses his rest; his countenance exhibits strong marks of a harassed and broken constitution; his eyes become hollow, and dim; the colour and muscles of the face indicate to an attentive observer, that something is undermining the patient's constitution.

The various preparations of mercury constitute the specific remedy, which is now generally employed for the cure of syphilis in its different stages; and though there may be among the vegetable tribe remedies as

efficacious as mercury for the cure of this disease, as these remedies are at present unknown, or not easily to be found, or known to be less certain and safe in their effects, they are seldom used, at least in temperate and cold climates; and the best informed practitioners of Europe generally prefer, and with reason, the different preparations of mercury; not only on account of the specific power of mercury against this disease, but because it is a cheap remedy, and always at hand, producing immediate and certain effects, in every stage and degree of syphilitic complaints. Thus, though we can cure an intermittent by other remedies, we scarcely use any other than the cinchona.

Method of Cure.

When consulted for syphilis, the physician should first enquire whether the patient has been affected with other syphilitic complaints before; when, and in what manner: whether he was in good health when the syphilitic symptoms appeared; whether he has, or does labour under any other disease, as phthisis, gout, itch, scrofula, scurvy, &c. He should examine whether the patient is of a strong and vigorous constitution, or of a feeble and irritable habit; whether he is not phlegmatic, or whether he is actually in a state of debility; finally, he should ascertain whether the disease is recent, or of long standing; and in the latter case, what remedies have been employed, and what effects have been obtained. He should strictly examine whether the symptoms of which the patient complains are really syphilitic, that is, produced by the syphilitic virus; or whether

they are not occasioned by some other acrimony. If a female, he should inquire whether she is pregnant; if an infant, whether the nurse has communicated the disease. All these points must be distinctly ascertained and noted; for our practice and success, as likewise the welfare of the patient, and frequently of a whole family, absolutely depend on an accurate knowledge of these several points.

The season of the year likewise deserves our attention, both as regards the symptoms of the disease, and the method of cure. The season and climate contribute, much more than is generally imagined, to render the syphilitic virus, as well as the mercury, more or less active; and what is often attributed to an insufficient quantity of mercury, or to an improper preparation of this metal, is but too often owing to cold, or to the inattention of the patient, which retards, or sometimes prevents the effects of the mercury on the syphilitic disease. On the other hand, the same cold, or the peculiar irritability of the patient, often occasion, during the use of mercury, colics, diarrhœas, rheumatisms, profuse salivations, tetanus or paralysis, &c.; while the effects of the mercury are in general more prompt, and more powerful, and less dangerous, in a warm climate and mild season. All these circumstances, likewise, frequently require particular attention in the choice of the mercurial preparation, and make it necessary to join other remedies with the mercury, or to premise diluents, sudorifics, bathing, tonic remedies; or finally, to adopt the alternate exhibition of these remedies, and of mercury.

It is advantageous, and even necessary, in some cases, to prepare the patient by suitable evacuations, bathing, regimen, &c. before he undergoes a mercurial

course; for the mercury often proves stimulating, especially in robust and plethoric persons. If the mercury is administered to persons endowed with such a constitution, without their being previously prepared, it frequently excites a violent inflammatory fever; while, in other cases, it is more particularly determined to the chest, intestines, or salivary glands. In general, it should be observed, that different constitutions are differently affected by the syphilitic virus, and likewise by the mercury; and that the success of the treatment, especially in confirmed syphilis, depends in some degree on the attention bestowed on this subject.

In general, the difficulty of curing syphilis is rather in proportion to the length of time the virus has remained in the system, to its combination with other diseases, to the partial or injudicious treatment, than to the severity of the symptoms. Indeed, we observe in practice, that there is greater difficulty in curing an old and inveterate syphilis, especially when the patient has been harassed by different remedies, injudiciously selected or improperly administered, and the disease as it were perverted by an ill-judged palliative treatment. We then find it necessary to have recourse to the most active preparations of mercury, or even to other remedies, according to the character of the disease with which syphilis is complicated; at the same time we can, in general, cure this disease very readily, by the mildest preparations of mercury, if recent, even though accompanied by the most violent symptoms.

If the patient is plethoric, bleeding is often proper, before he begins the use of mercury. When the bowels are costive, a purgative should be given once or twice, according to circumstances: but if the patient is other-

wise in good health, before the use of mercury, and continues so for the three or four first days of the treatment, it is useless to prepare him, or to administer any other remedy than mercury.

Before he begins the mercurial course, the patient should be informed of the effects of mercury on gold or gilded jewellery, as rings, watches, &c.; not only to prevent these things from being spoiled, but what is of greater consequence, to prevent the patient from being discovered, which women are particularly interested in avoiding.

When I have determined on the administration of mercury, I direct the patient to go into a warm bath made of a decoction of bran, or of simple water, and to remain for half an hour or an hour in this bath, the temperature being determined by the agreeable feelings of the patient. But as the patients are liable to be deceived, to prevent all mistakes, I direct them to examine the heat of the bath, before they go in, by means of a thermometer. I term it a warm bath, when the mercury rises to 29° of Reaumur's scale, or 96 or 98 of Fahrenheit. When the patient has been in half an hour, I direct him to be rubbed with the flesh brush, or a piece of flannel. On leaving the bath, he should take a glass of good wine, and then go to bed. By these means the skin will be well cleansed, and be better fitted for performing its functions, which ought always to be attended to before and during a course of mercury.

I shall speak of the different preparations of mercury, in a separate chapter. We should attentively observe whether the mercurial treatment already begun agrees with the patient; if it does not, it should be immediately changed. It may be received as an established and general

rule, that no preparation of mercury is adapted to all cases. The constitution of the patient, the state and violence of the disease, oblige the physician to vary the plan and the preparations; they must be adapted to the circumstances. In one case, the gray oxide of mercury, in another a saline preparation, agrees best; and of these, sometimes one, and sometimes the other, is to be preferred. Patients who cannot bear the frictions, sometimes bear very well the internal exhibition of mercury; and vice versa, those who cannot bear mercury internally, feel no inconvenience from the frictions. Some patients are incommoded by one preparation of mercury, yet they can take another without inconvenience. Some can take these preparations better when formed into pills; others in powder, or dissolved in some fluid. The practitioner must be governed by the temperament, and even by the disposition of the patient: to one who is opposed to the frictions, he must give an oxide, or a saline preparation of mercury. The oxide of mercury with mucilage, formed into pills, agrees often with irritable and delicate persons; while the mercury triturated and formed into pills with the extract of liquorice, or mercury triturated with honey and sugar-candy, would be preferable. In all these preparations, the mercury is reduced to the state of a gray or black oxide. In other instances the more acrid and saline preparations of mercury will be better adapted, and more efficacious. In general, for some years past, I have preferred, when administered internally, the oxides and mildest preparations of mercury, to the acrid and saline, as the corrosive sublimate. The young practitioner must be informed, that no one preparation of mercury is suited, in all cases, to produce a certain and radical cure. It is impossible to particularize

every circumstance in the treatment, but the following general rules should be observed, as well as those to be mentioned in the chapter on the preparations of mercury.

The patient whom we undertake to cure of the pox, should have sufficient strength to bear the use of mercury. We must not think of a mercurial course, while the patient is affected with a nervous, hectic, or inflammatory fever; with the scurvy, gout, scrofula, cancer, or phagedenic ulcers. In all these cases, I have constantly observed, that the mercury is not only injurious to the patient, but if persisted in, it often proves fatal. We must, therefore, begin with the cure of these disorders, if possible; or, if the syphilitic symptoms are so urgent as to render the immediate use of mercury indispensable, we must either give it in conjunction with the remedies adapted to those disorders, or else adopt an alterative course.

If the patient is very irritable, or in a state of great debility, we must inquire whether this is his natural condition, or whether it is the consequence of frequent debauchery, or whether it may not be the effect of the mercury previously taken; for this state sometimes proceeds from the improper or injudicious use of this remedy: often, likewise, it is owing to the syphilitic virus concealed in the system, and here the immediate use of mercury is required; while in the other cases, nourishing diet and tonic remedies are required, previously to the administration of mercury.

When it is intended to give sufficient strength and vigour to the patient, a healthy situation in the country, is among the first things to be prescribed; then asses or cow's milk; or what is still better, in many cases, for

patients in easy circumstances, is to suck a woman with a good breast of milk. This milk is the best tonic with which I am acquainted, for debilitated persons. The patient may likewise take sago, saloop, vermicelli, a little wine, an egg beat up with sugar, the decoction of the lichen islandicus in water or milk, light farinacea, the flesh of young animals when roasted, and not too fat. If he is fond of porter, and it agrees with him, he may drink it at his dinner; or instead of porter, a few glasses of sherry and Hungary wine will be very wholesome. All kinds of moderate exercise, and the occasional use of the flesh brush, will greatly contribute to the benefits of this regimen. Generally speaking, no medicine will be required; but if thought necessary, or desired by the patient, there is nothing better than small doses of cinchona taken alone or in a little good old wine. If the patient is very low, the tinctura ferri æthereæ, ph: syph., has appeared to me the most efficacious remedy. The cold bath is sometimes of great service, but it is not adapted to all cases. All these means, together with cheerful company, provided that lascivious ideas and nocturnal pollutions are not excited, will contribute greatly to prepare the patient, and to give him strength to bear the use of mercury. If the debility is occasioned by the virus itself, mercury, as I have already mentioned, is the best tonic. I have seen persons in this state, agreeably surprised by the strength they acquired in eight or ten days, from the use of this remedy.

During the use of mercury, a mixed diet of vegetable and animal food, as the most natural to our species, agrees the best, provided all articles that are fat, hard, and difficult of digestion, are avoided. Acids sometimes

cause griping and purging during the use of mercury; should this occur, they must be avoided. The moderate use of wine at table, cannot be injurious. It is not every stomach that will bear malt liquor, during a course of mercury: when it agrees with the stomach, I see no reason why the use of it should not be permitted, and I never knew any harm to result in such cases. I always insist upon my patient going to bed early, for much sleep is favourable during a course of mercury. I have always found it best to allow the patient moderate exercise on foot, on horseback, or in a carriage, and not to confine him to his chamber: but if the season is cold and wet, it is safer to make him stay in the house. Night air is particularly dangerous, for it is commonly cold, damp, and mephitic: hence all persons taking mercury, should carefully guard against it. I have had many instances of syphilitic patients who, from not attending to this circumstance, while taking mercury, have impaired their health and constitution for many years, and even for life. When indispensable business obliges the patient to go abroad in very cold, wet, and unwholesome weather, he should be warmly clad with a flannel or cotton waistcoat next his skin, and good warm woollen stockings. In fat persons, or those disposed to corpulency, in whom the disease has taken deep root, the decoction of guaiacum is successfully given in conjunction with the mercury.

In all cases of syphilis, especially if inveterate or very obstinate, we should endeavour to make the mercury pass off by perspiration, in proportion as it is administered; but this is not to be effected by profuse sweating, for fear of weakening the patient and causing some other disease, especially if he is cachectic, or of a delicate

constitution. If the system is naturally disposed to salivation, or to immoderate sweats, we must proceed with the greatest caution. In such cases, the patient should be confined to the house, particularly in bad weather, his room being kept moderately warm, his body, and especially his head and neck, not too much covered. The temperature of his room in winter, should be between 75 and 78 degrees of Fahrenheit, or between 18 and 19 of Reaumur. And if he is obliged to go abroad at this season, he should wear flannel or cotton next his skin. But in fine dry weather, I am of opinion, that the patients should go abroad; for I have found in many cases, that the enjoying of fresh air has contributed to prevent salivation, without retarding the cure. These precautions are not required in warm climates, or in mild seasons. If the patient is weak, he may take with advantage from a scruple to a drachm of cinchona in milk, night and morning, for ten days or a fortnight; but on no account should the mercury be administered internally, while we are giving the cinchona or other astringents, for the oxide of mercury would unquestionably be decomposed by these remedies, and the effects of both be destroyed.

By these means I have commonly succeeded in preventing the bad effects of mercury, noticed above, as profuse sweats, salivation, and likewise in preventing it from passing off by stool; which ought always to be attended to in a course of mercury. In the two first, the mercury, though carried into the system, seems to pass off by the salivary glands and the skin, as soon as it is introduced, without producing the salutary effects which are absolutely required for destroying the syphilitic virus, and without procuring a radical cure: and when the mer-

cury excites purging, it produces little or no effect on the disease. I have seen many patients treated in this injudicious way, who, after having taken mercury for six weeks or two months, which during that interval had occasioned continual diarrhœa, were, at the end of the treatment, nearly in the same state as when they began.

The mercury is to be thus continued, if no particular circumstance prevents. The patient should go into the warm bath every two or three days, if his constitution is sufficiently strong; those of a weak and relaxed habit do not bear it so well. Whenever the patient perceives a disagreeable coppery taste in his mouth, when his breath becomes offensivé, his gums swollen, and his teeth loose, and when he spits more than common, we must proceed with caution; and if the salivation appears copious, the farther exhibition of mercury must be suspended for some days; the patient should go into the warm bath, his skin be rubbed with the flesh brush, and he must carefully avoid exposure to cold. If the salivation continues, the patient should gargle frequently with an infusion of sage with honey and alum or borax, or with a decoction of nut-galls, especially if the mercury has produced excoriations or ulcers in the mouth, and purge himself with the flowers of sulphur; but in general all acrid purgatives should be avoided, lest they should occasion, as frequently happens, diarrhœa, which it may be difficult to restrain, and which may endanger the life of the patient. If the mercury produces too great a determination to the skin, causing copious and profuse sweats, its use must be suspended, and the cinchona given in powder or infused in wine. The infusion of sage, recommended by Van Swieten for immoderate sweating, deserves a trial in such cases. If, during the

administration of mercury, signs of general irritation occur, a little opium should be added, or its further use suspended for a few days, and the opiate given at night: but if the symptoms of an inflammatory diathesis prevail, the antiphlogistic regimen, and sometimes bleeding, will be required.

In this manner the mercury is to be continued, as stated above, till the virus is completely eradicated; which commonly takes place in twenty-five or thirty days, if the disease is not of long standing, and if the symptoms are not very violent. But if the disease is inveterate, and the skin or bones affected, even three or four months will be required for a complete and radical cure.

To decide whether the pox is radically cured, is one of the nicest points in practice; and when I state that the carelessness of the patients, and the want of judgment in practitioners respecting this important question, are the two fruitful sources of distress, pain, and misery, I advance nothing but what is confirmed by daily observation. If we possessed a remedy capable of exciting the latent virus, it would be a most invaluable discovery, and the existence of the disease would be ascertained, as the presence of iron is detected by the magnet.

Some historians relate, that the flesh of the lizard, iguan, and the eggs of the female, call into action the syphilitic virus concealed in the system; but this singular and interesting fact requires to be confirmed by some philosophic observer. I have observed, that the preparations of iron, and particularly the mineral waters impregnated with this metal, when taken internally, during very warm weather, have in many instances pro-

duced this effect; but the cases were not sufficient in number to warrant any general conclusion.

As soon as the mercury affects the patient's mouth, or whitens the golden trinkets worn by him, a very important circumstance is ascertained; to wit, whether the mercury has entered the system, which is absolutely necessary for eradicating the virus. The vanishing of the internal symptoms, and still more of the external symptoms of the disease, affords unequivocal evidence of the action of the mercury on the syphilitic virus. If the ulcers proceeding from a general taint, assume a better appearance, or begin to heal; if the pains, the periostoses, or exostoses, produced by the syphilitic virus, begin to subside during the use of mercury;—we are certain that it has acted on the cause of the disease, but we cannot be certain that it has entirely destroyed every particle of virus diffused in the system. Another proof that the mercury has acted on the system, is, when fat people become thin during the use of this remedy. This circumstance confirms the position, that the mercury produces a chemical change in the constituent principles of the blood.

The syphilitic virus may remain for some time dormant in the system, and this more frequently happens in persons who are fat, without its presence being manifest; and it is afterwards developed by some revolution of the system, or by some particular cause, as disease; the use of some medicine, for example, the chalybeate waters; by violent passions, by change of climate, by fatigue, the use of strong liquors, excessive indulgence at the table. The virus then occasions various symptoms, metastases, &c.; finally, syphilitic complaints more or less distinct, or more or less complicated. To obtain satisfactory assurance of the effects of the mer-

cury on the virus, and as far as depends on us, of the latter being entirely destroyed, to relieve the patient of all apprehensions for the future, he must be directed to continue the mercury for a fortnight or three weeks after all the syphilitic symptoms have completely disappeared. I have observed, that many patients bore the mercury wonderfully well while the disease existed, but the moment the virus was eradicated, they began to loathe it; and this effect may be considered as an indication that they were radically cured.

But I must repeat the observation I made before, that though the virus has been completely eradicated from the system, and that the patient is consequently radically cured, many instances occur in practice of exostoses or caries in the bones proceeding from this cause, which, however, sometimes remain for life, without any further inconvenience being experienced. Such caries often remains till nature alone, or aided by art, has effected the exfoliation of the bone. The excrescences, ulcers, and fistulas, which remain after a mercurial course, should be considered as local diseases, to be cured by topical means.

After the cure is accomplished, the patient should be very careful, for some time, not to expose himself to the cold, particularly to damp night air, for the body is then liable to be affected with rheumatic pains; this may be prevented by attention, by the warm bath, frictions over the body, and, according to circumstances, the exhibition of tonics.

In some cases, where there is great irritability of the bowels, or of the general system, opium should be conjoined with the mercury; and in all instances the patient should drink the decoction of guaiacum, or sarsaparilla,

during a course of mercury, but more especially after using the mercury for some weeks, when his system may be said to be saturated.

It is a general observation, confirmed by my own experience, that syphilis yields more readily to a proper treatment in warm dry seasons, and climates; hence Montpellier has been rendered so famous for the cure of obstinate and inveterate poxes. Hence persons who were not cured of their syphilitic complaints in Petersburg or Stockholm, &c., are sometimes cured in Italy or Portugal; and for the same reason they can there sometimes take the mercury without the least inconvenience till they are perfectly cured, though they could scarcely take a few grains in the cold damp climates of the north, without suffering from immediate salivation. I have seen many striking examples of this kind. Not that the air in the south of France, Italy, or Portugal, contains any peculiar balsamic particles, nor that the physicians of Montpellier are more skilful in this department of medicine than the practitioners of London, Stockholm, &c. as the patients often suppose; but it is merely because the atmosphere is there drier and warmer; and sometimes, also, because the patient, who was previously careless and inattentive, pays a stricter attention to the advice of his physician or surgeon. A skilful physician, however, has it in his power in every country to place his patient in the condition he deems necessary for the cure of the disease, by keeping him for weeks or months, by means of clothing, situation, &c. in a climate as suitable³ in all respects as the naturally warm climate of Montpellier, Naples or Lisbon.

CHAPTER XVI.

*On external Syphilitic Complaints, requiring a particular local treatment.*1. *On Syphilitic Ophthalmia.*

IN the fifth chapter I treated of ophthalmia, proceeding from suppressed syphilitic blennorrhagia, or arising from the immediate application of the syphilitic virus to the eyes. It remains for me to consider in this place, the ophthalmia, or inflammation of the eyes, originating in a syphilitic infection of the system.

These ophthalmias are generally seated in the globe of the eyes; they are commonly very painful and obstinate, continuing, in many instances, for weeks and months. They cannot be cured without a complete and regular course of mercury; the oxygenated muriate of mercury is particularly adapted to these cases. Moreover, the patient should keep to a low diet, abstain from spiritous liquors, and avoid the light as much as possible, especially that of the sun; at the same time, he should have recourse to leeches, blisters, repeated cathartics, and fomentations with warm water, in which opium has been dissolved. At the close of the cure, diluted alcohol, or a weak solution of the sulphate of copper, as two grains of the salt in four or six ounces of distilled water, may be employed with advantage. In some cases, especially if the eyelids are affected, the

external use of mercurial ointment proves beneficial; or what, according to the observations of Dr. Cullen, is preferable, the citrine ointment, triturated with double the quantity of lard, to render it less acrid. Liquid laudanum, dropped on the affected eyes, sometimes procures the greatest relief, after the necessary and usual evacuations. Good effects are supposed to have been received from bathing the eye, five or six times a-day, in a weak solution of the oxygenated muriate of mercury.

Sometimes the syphilitic virus is determined to the lachrymal sac and ducts, producing fistula, which will require a mercurial course; and if the complaint remains obstinate, the proper surgical means for restoring the passage to the tears. We should always bear in mind, that the application of all external means are unavailing, as long as the virus remains in the system.

Sometimes it attacks the optic nerve, causing *amaurosis*. The best mode of treating this complaint is by the internal use of the oxygenated muriate of mercury, and the application, twice a-day, of the sulphate of mercury as a sternutatory.

2. *On Deafness, and other Syphilitic Complaints in the Ears.*

Syphilitic deafness (*dysecæa syphilitica*) proceeds, 1st, from a suppressed syphilitic blennorrhagia; 2d, from the syphilitic virus diffused through the system, and deposited on the ears; or, 3d, and lastly, from syphilitic ulcers or swelling in the internal fauces, affecting the Eustachian tubes.

We have taken notice of the first kind in the fifth chapter. The second is a simple affection of the organ of hearing; or it is complicated with ulcer, caries, or syphilitic exostosis in the bones of the ear; sometimes even with an abscess in the brain. The third, produced by syphilitic ulcers affecting the orifices of the Eustachian tubes, consists rather in a depravation of the hearing (*paracusis*), or disagreeable *tiunitus aurium*. All these complaints are sometimes accompanied by violent pain in the ears, and a puriform discharge from these organs. (*Otorrhæa*.)

They require a complete antisyphilitic treatment. The vapour of warm water, or injections with a little tincture of opium, or of myrrh with honey, sometimes tend to allay the disease. In relation to the topical means to be applied to the ulcers in the mouth, see article *Sore Throat, Ulcers, Caries*.

3. On *Cephalagia Megrain*, or *Syphilitic Headache*.

Syphilitic Cephalagia is produced by the virus irritating the membranes of the brain and cranium, or by a caries or syphilitic exostosis compressing or irritating the brain and membranes, thus sometimes causing dreadful headaches, and even mania and fatal epilepsy. These headaches are very obstinate, and sometimes incurable; they require the general means employed for the cure of syphilis. Trepanning has sometimes succeeded, in cases deemed desperate. The patient often finds relief by lying bare-headed, and on the ground.

4. *On Odontalgia, or Syphilitic Toothache.*

The syphilitic virus, in affecting the eyes, the mucous membrane of the nose and throat, sometimes attacks the gums, producing syphilitic toothache, which must be carefully distinguished from that produced by the mercury, or mercurial odontalgia. In syphilitic odontalgia, the gums should be rubbed with the muriate of mercury.

5. *On Syphilitic Complaints in the Nose.*

Ulcers of the nostrils, originating from the immediate application of the syphilitic virus to the nose, through want of cleanliness, should be carefully distinguished from ulcers depending on a general taint, termed ozæna. The ozæna is principally seated in the mucous membranes lining the frontal and superior maxillary sinuses; it is frequently combined with caries of these bones, or of the bones of the nose. The discharge is ichorous, acrid and very offensive; and as the means of cleaning these ulcers is very difficult, they soon corrode the ossa turbinata and the vomer, which come away in pieces. The nose being no longer supported by the vomer, falls in and disfigures the most beautiful countenance; the voice becomes hoarse and nasal, the patient losing at the same time the power of articulating distinctly. Till within these twenty or thirty years, such miserable objects were frequently seen in the streets of the large cities in Europe; but thanks to the improvement and perfection of the healing art, they are now rarely met

with in London or Paris. I have observed, that the number of women thus disfigured greatly exceeds that of the men; probably because the women generally are more inattentive to the regular and continued treatment required for the cure of syphilis, and because they allow the disease to take deeper root before they apply for assistance.

It must be observed, however, that ulcers of the nose frequently arise from other acrimonies, especially the herpetic.

Besides the general anti-syphilitic treatment, the diseased parts and those contiguous should be frequently cleaned with appropriate injections, as lime water with the oxygenated muriate of mercury, the diluted tincture of myrrh, with the addition of a little honey.

6. *On Syphilitic Sore Throat (Pharyngitis seu Tonsillitis Syphilitica.)*

When the syphilitic virus is absorbed into the system, it generally produces its first effects in the throat. The patient experiences but little pain, or only a dull pain, or mere uneasiness and difficulty in swallowing. On examining the throat, we sometimes perceive only a considerable swelling of the tonsils and uvula, accompanied by an increased redness of these and of the parts contiguous. The patient, often not even suspecting the cause, imagines that he has caught cold, and the vulgar practitioner prescribes discutient gargles, sudorifics and cathartics, which are continued for days, and even weeks; but the disease, instead of abating, increases daily, when finally the patient and the physician begin

to suspect some mistake, or another physician is called in, who discovers the real nature of the complaint. Such quincies rarely continue any length of time, without ulcers forming in the tonsils or uvula, back of the mouth, or even the pharynx; which in the latter, by compressing or corroding the orifices of the Eustachian tubes, produces a very unpleasant and partial deafness, or a *tinnitus* or *susurrus aurium*; at other times the gums become ulcerated.

We must always very carefully distinguish syphilitic ulcers of the mouth and throat, from scorbutic and mercurial ulcers; that is, ulcers produced by the acrimony which the mercury has communicated to the saliva, and more especially from those which, though originally syphilitic, have lost that character; for if the mercury is continued in such cases, the patient may be essentially and even irreparably injured. Practical experience is the only sure guide in such cases. In my opinion, there is little danger of error in treating as syphilitic, those ulcers which are covered with a white lardaceous crust, having hard and elevated edges, with intense redness in the surrounding parts, and which appear before the patient has taken mercury.

Syphilitic ulcers are sometimes so deeply seated in the throat, that it is difficult to discover them at first sight; and this may sometimes occasion an error respecting the nature of the disease. An account of the following cases may perhaps be useful to young practitioners.

A gentleman of a strong plethoric constitution, fifty-five years of age, was affected with a sore throat and fever. The physician, after examining his throat and pulse, ordered bleeding, with an antiphlogistic gargle

and purge; when the disease not abating, eight days after, another practitioner was called, who repeated bleeding, purging, and ordered a different gargle, from the use of which the patient found himself better. At the expiration of seven weeks, when he felt, as he expressed himself, the disease was not quite gone, I was consulted. After the former prescriptions were shown to me, I examined his throat, and though I could not discover any ulcer, told him I suspected a syphilitic cause; which he hardly would agree to, telling me that he had had no syphilitic complaint these many years past, and that since that time he had enjoyed the most perfect state of health. I desired to examine his throat once more; which he readily complied with, though he was one of those persons who with the greatest difficulty can let their throat be examined. With a wax taper in one hand, and depressing the root of the tongue by means of a large spatula, as much as possible with the other, I discovered very low down on the right side, a deep but small syphilitic ulcer, which had escaped my sight at first, and would now have done so, had I not examined the throat with such peculiar care. Upon mentioning to him the evident cause of his disorder, my advice was complied with; and after the internal use of mercury for eight days, his sore throat was perfectly gone, and by continuing it a month longer, a radical cure was obtained.

The other patient was a lady of rank. She had but first felt a slight difficulty in swallowing within a few days, which being frosty she ascribed it to a cold. I immediately, upon inspection, discovered the cause of the disorder; and as women have always a right to the greatest delicacy and secrecy of a physician, without

asking her any questions, I ordered her to keep her throat warm, and promised to send her some medicine, which would relieve her in a few days; and the same was afterwards, under another form and pretence, ordered to be continued for a few weeks longer, till I thought her perfectly cured.

Another patient consulted me about a sore throat, for which he had taken advice and medicines already, for the space of three weeks, without any relief. I told him, that from the very appearance of his face and eyes, I suspected quite a different cause of his disorder than he had hitherto imagined; which indeed was most evidently confirmed by a large syphilitic ulcer, which upon inspection I found seated very low behind the velum. He then gave me the following account:

That he had been affected with a violent clap two years ago, when he was at Venice, which for a particular reason he had wished to be removed or stopped as soon as possible; that, for this purpose, he was recommended by a friend of his to a surgeon in that place, who was in possession of an injection which had that infallible effect. That this surgeon complied with his desire, though with reluctance; and foretold him that some time after being cured thus hastily, by his injection, the venereal disease would break out in some other part of his body; assuring him that he had seen the same effect from the same remedy, happen in several other patients, who applied to him in the same manner he did. That he neglected this caution; that the running was perfectly stopped in forty-eight hours; and that he had never thought more about it, having been perfectly free from venereal, as well as any other complaints ever since. This case was to me a very

instructive one. First it shows, that the syphilitic virus may remain a long time concealed in the mass, without producing any sensible effects. And secondly, it evidently confirms what I have advanced above, on the frequent identity of the virus of blennorrhagia with that of syphilis, and on the uniformity of the effects produced by either when absorbed into the system; and it strikingly evinces the fallacy of the position advanced by many writers, and more recently by Bell in his Treatise on Gonorrhœa, respecting the non-syphilitic nature of gonorrhœa. But lastly, it shows what I could not have expected *a priori*, that a recent blennorrhagia may sometimes be stopped or repelled without producing swelled testicles, ischury, strictures, or any immediate effects in the mass.

Syphilitic ulcers of the throat, tonsils and gums, which are frequently termed aphthæ, resemble exactly the syphilitic ulcers of the genital organs. Their bottom is commonly covered with a thick white crust; their progress is generally very slow, though sometimes it is rapid. Hence they frequently require, besides a mercurial course, topical applications to check their ravages, as injections, or gargles, composed of a solution of the oxygenated muriate of mercury, with the addition of the tincture of myrrh, &c. according to circumstances; or frictions with the muriate of mercury on the gums and internal membrane of the mouth. I must here remark, that when the virus has been a long time in the system, or that the patient has repeatedly taken mercury before for the same disease, without having continued it a sufficient length of time, or from other causes hitherto not sufficiently known, then ulcers of the throat appear very obstinate: mercury, though adminis-

tered judiciously and with every requisite precaution, seems to produce no impression or salutary change. In such cases, it is advisable to make frequent use of mercurial frictions, and of injections with the oxygenated muriate of mercury dissolved in pure water, or in lime water.

When the palatum molle is destroyed, the patient will require, in order to speak and eat, an obturator or artificial palate, made of a plate of gold or ivory.

If the ulcers of the mouth, tongue, throat, &c. are owing to the acrimony of the saliva, produced by the mercury, this remedy must be immediately discontinued, and the ulcers should be touched three or four times a-day with a saturated solution of borax, or with a solution of half an ounce of alum in a pint of water, or of a grain of the sulphate of copper in one or two ounces of distilled water. These solutions, further diluted with water, or according to the advice of professor Sprengel, a decoction of galls, may be advantageously used in the form of injections or gargles, six or eight times a-day. If they prove very obstinate, the decoction of cinchona should be administered for some days, giving every two or three days a little rhubarb or sulphur. It is proper to observe, that these ulcers often occasion more uneasiness towards evening, and during the night; and thus readily appear to a less attentive practitioner, as if they were really syphilitic: the more readily, as these ulcers, originally syphilitic, are sometimes, during the use of mercury, converted into very dangerous mercurial ulcers. During the cure of these ulcers, especially when effecting the gums, the practitioner must be very careful to prevent their concretion with the parts contiguous. I have seen cases where, for want of

this attention, it became necessary to separate, by means of the bistoury, the gums from the cheeks. The ulcers of the tongue, gums, and lips, proceeding from the acrimony communicated by the mercury to the saliva, frequently continue or return from time to time, even for many years after the syphilis has been cured; and torment the patient with the apprehensions of their being the incurable dregs of the disease. They often yield to the internal use of the decoction of cinchona, and to the application of alcohol, or of a solution of borax, with the tincture of myrrh and honey: the sulphur and alkaline mineral waters are often very beneficial in such cases.

The scorbutic ulcers of the mouth require antiscorbutic remedies, and an appropriate diet. If the ulcers of the mouth and throat proceed from any other cause than those above mentioned, and if they do not yield to the remedies I have recommended, opium and the most powerful tonics, internally, and externally in the form of gargles, have sometimes proved salutary. Dr. Nooth has found, lately, that opium given internally, and gargles formed of diluted alcohol, were the most efficacious remedies, not only for syphilitic ulcers, but for many others, and for the erysipelatous ulcers affecting the throat. One part of the nitrate of silver, dissolved in a thousand parts of water, has been recommended by Dr. Hahnemann as an excellent remedy for ulcers in the throat, which grew worse under the use of mercury.

7. *On Syphilitic Complaints in the Skin.*

Syphilitic spots, (*maculæ syphiliticæ*), are of a red copper colour, slightly elevated, round, hard, with cal-

lous white edges, occurring principally on the breast, neck, forehead and temples, &c. Sometimes they appear very soon, but commonly not till some time after the virus has been absorbed; they are at first in patches of a light brown colour, but they soon separate into small distinct spots of a dark brown colour. At other times they resemble, in colour, the greenish yellow spots which remain after contusions. In a few days they disappear, and again appear in other parts of the body, increased in size, and covered with a crust or scale, which peels off; sometimes they are converted into tetter, or large painful ulcers, with raised and inflamed borders. When occupying the edges of the hairy scalp, they have received the name, by an improper witticism, of *corona veneris*. A similar eruption sometimes appears on the hand, especially on the palm; it is of a dark colour, with white edges, slightly elevated in the middle, and producing a desquamation of the cuticle.

Syphilitic tetter, (*herpes syphiliticus*), form thick yellow scabs, accompanied by great itching, and a copious oozing of matter. When they occur on the extremities, they very frequently occasion buboes in the groin or axilla.

Sometimes there is an eruption over the whole body, of red, hard, dry spots, attended with itching, and terminating in a desquamation of the cuticle; this constitutes the lepra, or lichen syphilitica. Sometimes, these spots rise into hard pimples, suppurating at their apex, termed by authors syphilitic itch, (*psora syphilitica*).

For the *elephantiasis*, or *lepra nigra*, see chap. 28.

For the disease termed *yaws*, or *pian*, see chap. 27.

The tinea syphilitica forms white scabs on the hairy scalp, accompanied by syphilitic spots and pustules on

the forehead, and by fufuraceous tetters on the ears. This disease is sometimes seated, like the *tinea capitis*, in the bulbs of the hair. It is seldom cured without the hairs being extracted. After this operation, the citrine ointment, with a portion of the acetite of lead, or according to Plenck, the application of the *liquor ad condylomata*, generally prove successful.

The tetter on the chin, (*mentagra syph.*), consists of numerous pustules on the part of the chin occupied by the beard, forming scabs, with a discharge of gluey matter. The *mentagra* mentioned by Pliny, and which he states to have been very infectious at Rome, being readily communicated by kissing, appears to have been a species of lichen, accompanied by great itching. These diseases are sometimes very obstinate, and besides the general treatment, require the most powerful topical applications, among which the principal are the *unguentum syph. citrinum*, *lotio syph. lutea*, *mel hydrargyri*, (Ph: syph.) In very obstinate cases a trial may be made of a solution of the superoxygenated muriate of potass.

The tetter on the chin, and on the scrotum, frequently derive their origin from the syphilitic virus; and when treated by repellents often occasion the most distressing complaints, especially when the practitioner has mistaken their cause: the intelligent physician frequently effects cures which are deemed miraculous.

It is properly in this disease, that Plummer's pills, and the oxygenated muriate of mercury, often prove very beneficial. I must, however, remark, that though the latter remedy removes the disease of the skin, it does not always radically cure the pox; at least this is what I have frequently observed in our climate.

In some syphilitic affections of the skin, I have seen, independently of the internal use of the oxygenated muriate of mercury, benefit derived from a warm bath, composed of a decoction of bran, in every pound of which four or five grains of this mercurial salt were dissolved; taking care to rub the affected part gently at the time.

The topical application of a solution of the same salt, of the unguentum citricum alone, or with the addition of a portion of the acetite of lead, I have found successful in very obstinate complaints of this kind, and for the cure of which other remedies had been ineffectually tried. It is especially in these complaints, as well as other obstinate and inveterate forms of syphilis, that the *decoctum lusitanicum*, the decoction of galls, of the tops of the *solanum dulcamara*, of the root of the *daphne mezereum*, and also of the *lobelia syphilitica*, &c. in my opinion deserve particular attention.

I have seen a disease of the skin, apparently syphilitic, of the most obstinate and inveterate kind, in which all other remedies failed, cured by small doses of the yellow sulphate of mercury in solution. Some practitioners have likewise used, with great success, the white oxide of arsenic. Dr. Quarin, of Vienna, states, that he has cured very obstinate syphilitic tetter and itch by a strong infusion of the *teucrium scordium*, taken to the extent of two quarts a-day. Doctors Odhelius and Biornlund have published, in the Memoirs of the Academy of Stockholm, some interesting observations on the use of an infusion of the *ledum palustre*, in several cases of lepra. This plant deserves to be tried in obstinate syphilitic complaints of the skin. I have found the *decoctum syph. roborans*, (ph: syph.) very efficacious

in many of these complaints. But I offer it as a general rule, that without the use of emollient warm baths, or according to circumstances, of the vapour bath, the best remedies frequently fail of producing the desired effects.

8. *On Syphilitic Excrescences.*

In the 13th chapter I treated of excrescences and rhagades. I stated, that these complaints sometimes originate from other sources than the syphilitic virus; for example, from an acid humour, or any other depraved state of the fluids; but, however, that they frequently proceeded from the same virus, originally applied to the genital organs and the parts contiguous, or from a general syphilitic taint. The latter are never radically cured, without a complete course of mercury.

The wattles are situated round the anus, and are so called from their resemblance to the wattles of the fowl.

Condylomata are projecting, painful, fleshy excrescences, seated round the anus and near the genitals. They differ from warts and fici in their irregular figure, spongy texture, and the offensive ichor or pus which frequently oozes from their surface.

Ficus, sycoma, sycosis, marisca, termed also sarcoma, are fleshy excrescences round the anus, on the labia externa, and prepuce. Warts generally appear on the red and moist surface of the genitals, but sometimes on other parts of the body. I have seen a young man, who had the whole chin covered with numerous small warts.

The horny warts, or excrescences, mentioned by Zapata in his History of the Conquest of Peru, vol. II. chap. I. page 80, which proved so dangerous, from which scarcely a man in the Peruvian army was exempt, appear to have been syphilitic.

The cure of all these complaints is the same, when they are syphilitic. They are frequently removed by a course of mercury, without the aid of any other means. In other cases, topical applications are required; such as the liquor ad condylomata, the lotio syphilitica lutea, powdered savin: sometimes it is even necessary to touch them repeatedly with the oxygenated muriate of antimony, or some other caustic. If all these means fail, they should be removed by the bistoury or scissars. The wound should be allowed to bleed, and then kept clean till it is perfectly healed. If after the operation, any portions remain, they may be touched with the caustic, or the red oxide of mercury may be applied, for without this precaution they are very apt to return. If the condylomata are very large, it will be advisable to apply leeches, which often greatly diminishes their volume, and then they are easily destroyed by topical applications.

I have often cured the cauliflower excrescences with the *tinctura muriatis ferri*, ph: syph. applied regularly for some weeks.

Warts frequently yield very soon to the application of the nitric acid, applying afterwards, if necessary, the powdered savin, or the liquor ad condylomata. If the warts return, it is a proof that the roots have not been destroyed, and the topical applications must be carefully renewed. The electric spark passed through these tumours, occasions them sometimes to drop off, by pro-

ducing a slight inflammation at the base. When they are few in number, and with slender bases, the ligature is often sufficient.

I have seen many little porri on the genitals, removed by frequently applying the lotio syph. lutea.

Some writers have recommended the application of caustics only, for the extirpation of condylomata, and other excrescences of this kind; but I have known this method sometimes followed by distressing consequences. If these excrescences return, after being extirpated by the bistoury, as sometimes happens, Quarin states, that he found the decoction of bistort, or tormentilla, very efficacious. As these excrescences seem to be produced by a redundant or vicious secretion, this astringent, or the application of a weak solution of the sulphate of copper, may prove useful.

9. *Of Syphilitic Rhagades, or Fissures.*

I have little to add to the statement given in chapter XIII. When the rhagades are purely syphilitic, or complicated with this virus, besides the internal use of mercury, it will be advisable to rub the parts with the blue mercurial ointment, the citrine ointment; sometimes an ointment made with the butter of the cocoa nut and the nitrate of mercury, is preferable. Strictures of the anus, or of the vulva, the consequence of rhagades or ulcers, require the use of bougies adapted to the state of the canal.

The case of the patient mentioned in the thirteenth chapter, is the more remarkable, as the rhagades in the palms of his hands came on after simple blennorrhagia,

without ulcer, and continued even after a complete course of mercury.

10. *Of Syphilitic Ulcers.*

In chapter XI. I treated of syphilitic ulcers of the throat, eyes, genital organs, and of others, originating from the syphilitic virus applied directly to these parts. It remains for me to treat of syphilitic ulcers on the surface of the skin, or of any other part of the body, the consequence of a syphilitic infection of the system.

These ulcers are generally less disposed to make rapid progress, or to be attended by dangerous consequences, and therefore rarely require topical remedies. They commonly disappear by a course of mercury. There are, however, cases in which recourse must be had to topical means. Sometimes these ulcers are complicated with caries, or a corruption of the medulla of the subjacent bones; at other times with scurvy, or with tetter, or scrofula, or any other acrimony. See chapter XXIX.

It is a very important, and often a very delicate point to discover the true nature, simple or compound, of these ulcers, especially in females. I believe it may be received as a general rule, that in the temperate climates of Europe, syphilitic ulcers rarely occur on the legs, except in the case of syphilitic caries; or on the feet, for the elephantiasis is a disease of hot climates. Consequently, if we meet in practice with obstinate ulcers of doubtful character, above the knee, we can scarcely err by suspecting them to be syphilitic. The young practitioner will likewise be guided in his judg-

ment by their appearance: though very large, they seldom secrete laudable pus; their base is rather covered with a white crust or mucus, and their edges are raised and callous.

If these ulcers are simple, and we judge proper to make use of topical means, the *mel hydrargyri* is the best remedy, and unquestionably to be preferred in all cases to the boasted suppurative ointments. This remedy is particularly suited for hospital practice, but it should be applied only every two or three days; and instead of covering them with rags or lint, I have used with success a piece of fine sponge. When the sponge is removed, it should be plunged into warm water, and after cleaning it, it should be dried, not in the sun or window, as the nurses might suppose the most convenient, but near the fire in winter, and in the summer in a cage inaccessible to flies; for if dried in the open air, the flies would soon deposit their eggs in the sponge, which being applied to the ulcer, would soon be covered with maggots, which the less attentive practitioner might erroneously believe to be engendered or produced by a putrid ulcer. In some cases, opium should be joined with the mercury. The decoction of *guaiacum* sometimes produces good effects in ulcers of this kind. The administration of oxygenated remedies may be tried, according to circumstances, both internally and externally.

I wish particularly to direct the attention of the young practitioner to those syphilitic ulcers which are blended with tetters and leprosy. Treated as simple syphilitic ulcers, they at first assume a more healthy appearance, but they do not cicatrize, and they soon become stationary under the use of mercury; the other acrimony

then seems to predominate; or the system, becoming weak and irritable, renders it necessary to omit the mercury, and to adopt a different regimen. After pursuing an antiherpetic or antiscorbutic treatment, &c., or according to circumstances a tonic plan, for some weeks, the ulcers are observed to assume a more healthy aspect, and to heal.

In other cases we observe, that in proportion as the patient recovers his strength, or as the herpetic, or scorbutic acrimony is subdued, the syphilitic virus resumes its activity, and evidently renews its effects. These cases, which in the hands of common practitioners often prove fatal, require great skill and attention, and sometimes a nice discrimination not common among physicians. These diseases do not require a mixed treatment, as proposed by some writers, but an alterative course. I have had patients, in whom I have been obliged to return the fourth time to the mercurial treatment, after having as often interposed tonics and antiherpetics, &c.; and I have at length succeeded in saving and radically curing patients, who were abandoned as incurable. In these intervals, or after the syphilitic virus has been completely destroyed, the internal use of the carbonate of potash, or in other instances the oxide of iron, or the cinchona, or the *decoctum syphiliticum roborans*, the use of wine, sea-bathing, &c., often produce such surprising and salutary effects. But in no instance should we administer medicines containing an astringent principle, as the cinchona, with mercury; it would be destroying their respective effects.

In the intervals, when we are obliged to omit the mercury, the external application of powdered cinchona, rhubarb, colombo, or of the oxide of copper, the oxide of

lead, the oxide of zinc, the nitrate of silver, &c. are often attended with the happiest and most striking success.

11. *On Syphilitic Consumption and Atrophy.*

When the general emaciation of the system is without fever, it is termed atrophy, (*Atrophia*): when it is accompanied by hectic fever, it has received the appellation of consumption, (*Tabes*).

The consumption, (*Tabes Syphilitica*), may be derived, 1. From a syphilitic ulcer in the lungs or in any other viscus; 2. From syphilitic tetter in judiciously treated, or repelled from the organs of generation or any other part of the body; 3. From an obstinate syphilitic ulcer on the external surface of the body; 4. From a syphilitic caries or corruption, internal or external, of the bones.

The consumption and atrophy sometimes proceed from phagedenic ulcers, produced or maintained by the use of mercury; or indeed without ulceration, by the mere exhibition of very acrid preparations of mercury, especially of the oxygenated muriate of mercury. In fact, common experience evidently demonstrates, that all the preparations of mercury tend, in a greater or less degree, to emaciate the body. This species of emaciation is not dangerous; for after the mercurial treatment, the patients in general soon recover their flesh, and sometimes become fatter than before.

The atrophy likewise sometimes proceeds from a profuse salivation, which continues obstinate even after

the mercury has been omitted, whether this evacuation is the consequence of the irritation occasioned by the peculiar acrimony of the saliva, or by a relaxation or erosion of the salivary ducts. Sometimes the atrophy is the effect of diaphoretic drinks, or of drastic purges.

The consumption, accompanied by copious expectoration, and by syphilitic ulceration of the lungs, which is likewise termed syphilitic phthisis, requires the exhibition of mercury. I gave, in the eighteenth chapter, the history of a singular case of this disease, accidentally cured, by the internal use of the blue mercurial ointment. Professor Franck has radically cured, by a course of mercury, a similar phthisis, accompanied by hæmoptœ, purulent expectoration, and the greatest emaciation; it had been produced by the repulsion of a syphilitic tetter from the scrotum. But it is often difficult to form a correct diagnosis, especially if no eruption appears on the skin, and if there are no other syphilitic symptoms. Sometimes our suspicions respecting the nature of the complaint, acquire an additional degree of probability, from indirect circumstances, especially if the patient is not constitutionally predisposed to phthisis.

In all these cases we must act with caution, and give the mercury gradually, and according to circumstances, in combination with the milk diet, and a decoction of sarsaparilla. If the patient recovers his strength under the use of mercury, as happened in the cases cited above, we may push it boldly till the disease is radically cured.

The hectic of irritation requires the exhibition of cinchona, milk and opium; or in some instances, the decoction of the lichen islandicus alone, or in conjunc-

tion with the root of the polygala amara, in water or in milk.

The decoction of sarsaparilla, with the sulphur of antimony, is often very useful in syphilitic consumption, especially in small doses with milk. If the patient finds his breathing oppressed by this regimen, a small bleeding will generally afford instant relief. But if the oppression continues on taking two or three ounces of this decoction, every three or four hours, the further use should not be enjoined. From half an ounce to an ounce of powdered sarsaparilla per diem, has afforded great benefit in cases of this kind. The decoction of malt and other antiscorbutics, are the appropriate remedies, when scurvy is combined with syphilitic consumption. The oxygenated remedies merit a trial in such cases.

For the treatment of consumption caused by phagedenic or mercurial ulcers, I must refer the reader to the particular chapters on that subject.

The atrophy caused by the excessive use of mercury, or of its acrid preparations, requires demulcent remedies, good nourishment, the warm bath, the internal use of cinchona, with sulphur, or of the sulphur and alkaline mineral waters. See chapter XXXII.

For the treatment of atrophy, produced by ptyalism, see chapter XXII.

The treatment of atrophy proceeding from too great an emission of semen, or rather from the frequent and violent irritation of the nerves which attends this evacuation, and which has been described by Hippocrates under the name of *Tabes dorsalis*, forms no part of the plan of this work.

12. *On Syphilitic Weakness, or Impotency.*

This complaint, though not dangerous, is very alarming, and renders the mind of the patient extremely uneasy. Sometimes it proceeds from the syphilitic virus concealed in the system. I have repeatedly observed it, but in a particular manner in one patient, who several months before had been affected with a violent blennorrhagia, of which at last he was cured, after having undergone a tedious and very improper treatment. The only remaining symptom was now a total inability, and want of venereal desire, which rendered him extremely low-spirited. On consulting me, I judged the complaint to proceed from the syphilitic virus lurking in the body, and prescribed him a mercurial course, and afterwards some tonic remedies, with two spoonfuls of Hoffman's anodyne liquor, morning and evening. He was likewise ordered to wash the scrotum and spermatic cord twice a-day with a table spoonful of the same liquor, mixed with some water: in three weeks time he was as well as ever. The treatment of impotency, and weakness of the genital organs, which proceed from other causes, are not included in the plan of this work.

13. *On Syphilitic Pains in the Muscles, Tendons, and Nerves.*

Fixed or wandering acute or chronic syphilitic pains, affect the head, sternum, throat, muscles, or joints of the extremities, or else only the genital organs and the

parts contiguous, in men; and then the glans, the perinæum, the testicles, the groins, the anus, the bladder, are alternately affected; at other times, pains in the body alternate with the running from the urethra or vagina, or with ulcers in the genitals. I have seen one case, where the syphilitic virus, after having produced a violent pain in the sternum, became fixed in one of the inguinal glands, where it produced a syphilitic bubo, which was cured by mercurial frictions.

Fixed or wandering pains, arising in different parts of the body, are generally ascribed by all patients who were formerly affected with syphilis, to the remains of the syphilitic virus in the system. This is indeed sometimes the case; but it ought to be observed, that these pains, so generally ascribed to the syphilitic virus, are often owing to very different causes, which should be accurately distinguished in practice.

Hence we should previously learn, 1st, whether the complaints are owing to some dregs of a former syphilis, to blennorrhagias, to ulcers, to a pox badly or imperfectly cured, to use a vulgar expression; or 2d, whether these pains are not rather owing to the mercury itself; and in this case, whether it is the immediate effect of the mercury lodged in some part after it has produced its effect on the syphilitic virus; or, indeed, whether it ought not rather to be attributed to the increased irritability of the nervous system, or to the weakness of the organs, the frequent consequence of an improper administration of mercury. 3d, Whether these pains may not be owing to the imprudent and repeated application of some preparation of lead, either internally or

externally. 4th, Whether they are not really rheumatic, gouty, or scorbutic.

Moreover, it is of importance to ascertain, whether these pains, spasms, &c., are acute and accompanied by a symptomatic fever; in which case they are often the consequence of the perspiration recently and suddenly suppressed during a mercurial course: or whether they are chronic, and of long standing.

Violent and fixed pains in a spot, often indicate that the bone beneath is affected, though no tumour is perceptible.

All syphilitic pains are aggravated during the night, particularly when the patient grows warm in bed: but though many authors have considered this symptom as characteristic of syphilitic pains, it is not peculiar to them; and on the other hand, some rheumatic pains, and pains after the colic produced by lead, and other pains, are likewise frequently increased during the night.

In the 11th chapter I described the treatment of erratic and alternating pains of the genitals, and the parts contiguous.

If the pains proceed from a regular pox, the use of mercury, united, according to circumstances, with sudorific decoctions and the warm bath, will be necessary to complete the cure; though the patients are often of a different opinion, founded on the length of time, and the quantity of mercury they have taken; whereas, if they are not caused by the syphilitic virus, the use of mercury will be evidently pernicious.

Authors who have mentioned these chronic pains, generally ascribe them to the mercury lodged in the bones; nay, there are even examples recorded in medical history, where mercury had been found, after the death of

such patients, collected in globules in different parts of the body, especially in the bones and their cavities. Whatever credit may be given to those assertions, it is certain, that we may generally, and sometimes pretty easily, cure those patients by a proper regimen, warm baths, especially the sulphur and alkaline mineral waters, aided by frictions, and by administering, at the same time, internally, proper tonic medicines, either alone, or united with antimonials. The vapour baths are, during and even after the exhibition of mercury, among the most powerful remedies for obviating the acute pains in the muscles and joints, and the other complaints often occasioned by mercury, which being reduced to the metallic state, is probably lodged under the periosteum, aponeuroses, tendinous sheaths, &c. The sweats thus excited, though abundant, never weaken or exhaust the patient.

But if those pains, instead of being of the chronic kind, arise from a sudden check of perspiration during a mercurial course, the use of tonics would be improper. In several desperate cases of this kind, where the body seemed as if it was affected with a general spasm, or tetanus, I have found, besides the warm bath, especially the vapour bath, the sulphur auratum antimonii, united with the extract of cicuta, a most efficacious remedy, given to the quantity of fifteen grains of each a-day. Dover's powder, with a proper regimen, proves sometimes in this case, as well as in rheumatism, a very serviceable medicine. But no benefit is to be expected from this medicine, if given in the usual manner. To obtain the best effects from this powder, it should be given in doses of twenty or twenty-five grains at six or seven in the morning, and not at bed-time, as is

the common practice. The patient should be covered with flannel, his linen being removed, keeping himself quiet till the sweat breaks out, when he should take a tea-cup full of warm sage tea, or white wine whey, repeating it every half hour till the sweat extends over the body. The sweating is to be promoted by the warmth of the bed, and by warm bricks applied to the patient's feet. He is to continue thus sweating gently, without going to sleep, for eight, ten, or twelve hours, taking occasionally some warm drink or wine whey, as stated above. If he is much incommoded by the sweat, he may throw off a blanket, and put his hands out of bed. Towards five or six o'clock in the evening, he may be wiped dry, put on a warm shirt, and change his bed-clothes. He may then take a little sago or rice, with three or four glasses of wine, and a piece of bread. He may then go to sleep, and rest for the night. The next day he may take his ordinary food; but he must remain in bed the whole day; and if the pains are not removed, he must begin the next day to take the sudorific, with the same precautions as indicated above. A warm bath, in which the patient should be gently rubbed, constitutes a proper preparation to the administration of this powder. If these pains arise from an increased irritability, produced by the improper use of mercury, a strengthening diet and tonic remedies, alone, or in conjunction with antimonials, will be very proper. During the administration of these remedies, the patient should use the warm bath; but when he has in some degree recovered his strength, he should go frequently into the cold bath, particularly of salt water. In all these complaints, the patient should have warm clothing, as a flannel waistcoat and woollen stockings. From not at-

tending to these precautions, I have known the best remedies fail, and the patients liable to relapses.

In some instances, the mercury seems to be the cause of these complaints. I know patients who, having made use of mercury repeatedly in their younger days, find themselves now, whenever they take the least quantity of mercury, affected with the most violent rheumatic pains. The proper remedies in these cases, are, the cinchona, opium, given even in large doses, and the sulphur springs.

Stoll informs us, that he often employed with success, in erratic pains, in tetters, and other syphilitic complaints, which had obstinately resisted various preparations of mercury, an electuary composed of three ounces of elderberry rob, three drachms of the extract of the *gratiola officinalis*, with three grains of the oxygenated muriate of mercury. In some cases he substituted, with success, the extract of the *aconitum cammarum* for the *gratiola*.

14. *On Syphilitic Complaints of the Bones.*

The bones are seldom affected by the syphilitic virus, as formerly, unless in confirmed and neglected cases of syphilis. I have seen, however, one instance where the patient, being affected with a syphilitic ulcer on the glans, was attacked the fifth day after with a considerable swelling in the lower part of the ulna. When the virus attacks the solid parts, it produces, 1st, a swelling of the periosteum, (*periostosis*); or, 2ndly, of the bones (*exostosis*), sometimes accompanied by excruciating

pains; or, 3d, a destruction of the external or internal substance of the bone, known by the appellation of caries, or spina ventosa. The bones which are the least covered with muscles, are the most liable to be affected by the syphilitic virus, as the tibia, the sternum, the clavicle, the ulna, and the bones of the cranium, of the nose, and of the palate.

By syphilitic exostosis, is commonly understood a hard circumscribed swelling of the bone: and the term *Hyperexostosis* is applied, when the substance of the bone forms an excrescence. For these tumours authors have employed several other vague terms, by which they intended to designate their situation, or their different degrees of hardness; hence the terms, tophus, nodus, gummi. Many have confined the last term to tumours which sometimes appear on the aponeuroses of the muscles; and the swelling which is not so hard, and more elastic, and which yields to pressure, they have denominated nodus; and the term tophus has been applied to very hard tumours. Others have divided exostosis into true, when the swelling is owing to an increase in the substance of the bone; and false, when the tumour arises from a thickening and inflammation of the periosteum. But the hardness of a node, or false exostosis (periostosis), is often as great as if the bone itself were affected; hence these tumours have been and are still often mistaken for real complaints of the bones, which are much less frequent than is commonly imagined. Dissection has lately shown, that these tumours, especially on their first appearance, are generally in the periosteum and not in the bone. Sometimes, however, and especially when they have been long neglected or

improperly treated, the bone itself becomes affected; the different laminæ rise and form a real exostosis.

I am of opinion, that all these different distinctions are useless; for no practitioner, however well versed in his profession, can pronounce whether the tumour in question is an affection of the periosteum, or of the bone itself; or, to use the common language, whether the exostosis is true or false. It may, however, be considered as a general rule, that the syphilitic virus rarely affects the bones, and that commonly the periosteum alone is affected, unless in cases of neglected and confirmed syphilis.

Syphilitic periostoses and exostoses are generally very painful, especially during the night, when the body is warm in bed; or even the affected part is exposed to external heat, or when it is pressed. But it should be observed, that though syphilitic pains of the soft parts, as well as those of the periosteum and of the bones, are in general worse at night when the affected parts are covered and warm in bed, than during the day when they are exposed to the air; this is not so constant, but what we often see instances to the contrary. In some cases, the pain continues day and night; in others, it returns periodically, once or oftener in the day, every two or three hours, the patient being relieved during the interval.

The exostoses often continue during life, though the syphilitic virus has been radically destroyed.

The syphilitic virus acting more powerfully or for a longer time on the bone, produces a real chemical decomposition of its constituent parts, as caries of the laminæ of the bone, or a destruction of the internal substance of the cylindrical bones. Sometimes this internal

destruction of the bones occurs at least for some time, without any external tumour. This has been very improperly called *spina ventosa*; for in this dreadful disease, there is neither thorn nor wind. In some more uncommon cases, the whole bone is enlarged; in others, several bones are diseased at the same time.

When the bones of the cranium are affected by the syphilitic virus, it sometimes occasions excruciating pains in the head, amaurosis, deafness, epilepsy, and even death. Where the bones of the nose, especially the vomer, become carious, they come away in pieces, and the nose falling in, leaves an indelible impression of the syphilitic disease. If the bones of the palate are destroyed by the caries, the patient can no longer articulate distinctly, unless the deficiency is supplied by lint, or by a thin ivory, gold or silver plate.

Sometimes the caries is not idiopathic, or in other words, is not caused by the virus lodged in the bones; but is the consequence of the denudation of a portion of the bone, produced by the progress of a syphilitic ulcer, or by the application of caustic, or of any other remedy. This is termed symptomatic caries.

Many practitioners are of opinion, that the bones of persons affected with syphilis become more brittle, and that such patients are consequently more liable to fractures. Professor Leber, of Vienna, communicated to me, some years ago, a curious and interesting observation, which merits insertion in this place. A man, apparently in good health, fell and broke his leg, while walking across his room. A skilful surgeon reduced the fracture, and applied the proper splints. After the patient had been confined for six weeks, the fracture was not consolidated, that is, no callus was formed; and as the bone remained in the same state for three

weeks, syphilis, with which the patient had been previously affected, was supposed to be the cause; he was accordingly put under a course of mercury, during which the callus became firm, and the fracture completely cured. A few well authenticated facts of this kind, would throw considerable light on the nature and effects of syphilitic virus. Such of my readers as are desirous of more information on this subject, will read with satisfaction the work of Dr. Bonn, entitled *Descriptio Thesauri Ossium Morbosorum Haviani*, in 4to.

Some authors have lately maintained, that the syphilitic virus produces sometimes the curious disease, termed *Malacostion*, or *Mollities ossium*: but after the closest inquiries, it appears to me more probable that practitioners, in order to conceal their ignorance respecting the cause of the disease, have attributed it to the syphilitic virus, in the same way as J. Hunter and many others have ascribed the greater part of phagedenic or obstinate ulcers to a scrofulous taint. The mollities ossium, of which a striking example occurred in Paris, is an actual decomposition of the bones. There is not one well authenticated case upon record, to show that the disease is at all connected with syphilis.

All syphilitic diseases of the bones require a complete mercurial course, and continued for a longer time than in the diseases of the soft parts; for sometimes the mercury must be continued for three or four months, in order to effect a radical cure. They often return three or four years after the syphilitic complaints of the soft parts have been imperfectly cured by mercury. The too early discontinuance of the mercury, before the virus is completely destroyed, is the frequent cause of

syphilitic affections of the bones; for the virus in this instance continues lurking in the system for a long time, without producing any visible effects, when it suddenly reappears with increased violence.

In all syphilitic diseases of the bones, in administering mercury we must carefully avoid salivation; for if this takes place, the mercury, though introduced into the system in great quantity, will not accomplish a radical cure, notwithstanding it has produced this debility, this cachectic state, which some authors have considered as necessary for eradicating the virus. I am of opinion, that this single fact will show that this theory respecting the action of mercury is completely hypothetical; for it is evident in these cases, that the mercury affords no relief, as long as it does not reach the virus, or come in contact with it, if I may be allowed the expression.

The saline preparations of mercury are the most appropriate remedies in the syphilitic diseases of the bones, particularly the nitrate of mercury, and sometimes the oxygenated muriate of mercury, administered in doses of a quarter of a grain twice or thrice a-day, with the decoction of guaiacum, or of sarsaparilla; to which may be added, in some cases, with advantage, the bark of the daphne mezereum; prescribing, at the same time, the warm bath every two or three days.

In the enlargement of the bones in general, I believe that topical remedies are of little use. There are cases, however, where the violence of the pain, and other circumstances, may oblige us to have recourse to them.

If the swelling appears to proceed only from a thickening of the periosteum or of the ligaments, in order to discuss it, a vigorous action should be excited in the part by frictions with the ammoniacal liniment, or by

blisters. If the swelling remains, after the mercurial course, but without creating pain or deranging the functions, it is better to do nothing, for it often disappears spontaneously; but if it resists the mercury, and causes at the same time a great deal of pain, some alleviation should be attempted. For this purpose, the most efficacious remedies are, internally, large doses of opium, and the decoction of mezereum, with antimonials; and externally, blisters, mercurial ointment mixed with camphor and opium, frictions with the muriate of mercury, or with the oxygenated muriate of mercury. In some very obstinate cases, mercurial fumigations, directed to the part, prove very efficacious. On other occasions, the violence of the pain is immediately dissipated by the caustic applied to the exostosis, dressing the ulcer produced by the caustic with the mel hydrargyri. But the application of caustic, and the incisions which have been recommended, prove injurious, when the bone beneath the tumour is not carious; for there is danger of its becoming carious by exposure to the air. Nevertheless, if, after a course of mercury, the pain and swelling continue, or are increased, it is very probable that suppuration has taken place, or that the bone is spoiled; and upon this supposition, or if the caries is evidently formed underneath, it will be proper to make a crucial incision down to the bone, to give vent to the pus, or to assist the exfoliation; or what is preferable, the caustic may be applied to the tumour, and afterwards an emollient poultice, or some digestive ointment, till the eschar comes away. If the bone is carious, the application of the trepan will be often useful and necessary. For this purpose, several holes may be made deep in the bone with the perforator, by which means

not only a free discharge will be afforded to the inclosed ichor, but the exfoliation will at the same time be promoted, and sometimes the removal of the carious portion will be entirely accomplished.

The application of the essential oil of sassafras has been proposed, with the view of aiding the exfoliation; and for the same purpose, Professor Plenck has recommended a lotion composed of the tincture of mastich, the oxygenated muriate of mercury, and the mel rosarum; administering at the same time, internally, mercury in conjunction with assa fœtida. But in cases of idiopathic caries, we must recollect, that no cure can be expected till the virus is completely eradicated from the system.

Symptomatic caries does not require the use of mercury: the exfoliation proceeds slowly, and by degrees, after the mercury has destroyed the syphilitic virus in the soft parts. The process may be assisted by the external application of the tincture of assa fœtida, or of mastich, and sometimes by the trepan.

It sometimes happens, through length of time, and neglect of antisymphilitic remedies, that the bones in the different parts of the body become carious, enlarged, and are affected in so dreadful a manner, that though the virus is destroyed by the use of mercury, the consequences are incurable, and even prove fatal to the patient. We may, however, sometimes succeed in curing them, by having recourse to other means. See Chap. 24, and 30.

When an inveterate and injudiciously treated syphilis terminates in deep ulcers, especially on the extremities, and by the corruption of the bones, mercury, far from being serviceable, tends only to hasten the death of the patient. See Chap. 27.

CHAPTER XVII.

On the particular treatment of Syphilitic Complaints in Pregnant Women.

SOME practioners are averse to administering mercury to pregnant women infected with syphilis, for fear of producing abortion. This apprehension is ill founded: but supposing even for a moment, that the mercury would render a pregnant women liable to miscarry, is it not in the eye of the law, and of sound philosophy, more just to risk the loss of a being whose very existence is precarious, and exposed to a thousand accidents, than to allow the disease time to make dangerous inroads on the constitution, and even to expose the life of the pregnant woman. Numerous and very powerful reasons urge us to cure, as early as possible, every pregnant woman affected with syphilis.

The first is, that by allowing the disease to increase for several months, the mother is in danger of perishing by the progress of the virus, or of having, after her confinement, the disease in its most dangerous and inveterate form. 2. By leaving the disease to itself, during pregnancy, there is risk of the child being attacked, and of its coming into the world infected with the virus, which may expose it to a premature death, or render it weak and sickly for life. 3. A third, and no less important reason, is, that by neglecting the disease during pregnancy, if the genitals are affected, as is often the case, the child which had escaped the

disease while in utero, runs the greatest risk of infection in its passage through the vagina. 4. The patient exposes the midwife or the accoucheur called upon to render her assistance, not only to the pox, but to be maimed for life, of which I have seen many miserable examples. See what has been mentioned in Chap. XI. on syphilitic ulcers arising from this cause.

Mercurial frictions have been recommended as the best method of treating pregnant women: it has ever appeared to me the most inconvenient. The performing the frictions is very fatiguing, even to a strong and healthy person; but how much more so to a pregnant woman. The fact is, there are few pregnant women capable of undergoing this fatiguing operation; and probably those who have recommended them, have had no experience, or have not paid sufficient attention. In respect to the frictions performed by another person, I believe them to be liable to very serious objections.

Hence it appears to me more reasonable, to administer such preparations of mercury as are best adapted to the constitution, to the particular state of health, and to the irritability of the patient. Mercury reduced to an oxide by trituration with gum or sugar, in conjunction with the decoction of sarsaparilla, is in many instances the most appropriate remedy. It is right to observe, that the warm bath should be used in moderation, and with some caution, by pregnant women, because these baths render them liable to miscarry. In every case, the genital organs must be carefully examined; and if any ulcers exist, the strictest attention should be paid to cure them completely, before parturition occurs.

If nothing prevents, we may wait till the patient is

delivered, and the treatment need not commence for fifteen or twenty days after delivery.

The warm bath should be prescribed once or twice; then the mercury should be administered, either internally or by frictions, according to circumstances. Every two or three days the patient may remain in the bath for half an hour, or an hour; but with the precaution not to administer or not to repeat them to women who may be too weak, or who are incommoded by them.

CHAPTER XVIII.

On the Syphilis of Children.

MOST children who are observed to be infected with syphilis, have not at birth any visible marks of the disease; and those, in whom the symptoms of the disease are manifest some time after birth, especially if they appear in the form of blennorrhagia of the genitals, of the eyes and ears, or in the form of ulcers of those parts or of any part of the surface of the body, seem rather to have received the infection during their passage through the vagina of a mother affected with blennorrhagia or syphilitic ulcers of the vulva. This kind of infection is at that period more readily communicated, as the whole surface of the body of a new born infant is almost as tender and as irritable as the red surface of

particular parts of the body; it is consequently very liable to be affected by the syphilitic virus.

The number of children who receive the infection in this way is so great, that some modern practitioners have doubted whether syphilis is ever communicated by the blood of an infected mother to the fœtus in utero; they have likewise doubted, as I have already remarked, whether a father infected with syphilis, without having any appearance on the genital organs, or even having blennorrhagia or syphilitic ulcers on these parts, could propagate the germ of the syphilitic virus by the semen to the child which he procreates in this state. In a word, they have denied that at the present time in Europe, the disease is ever communicated directly in the act of generation; or in other words, that syphilis is ever hereditary.

Doublet, who was physician to an hospital for venereal children, states, "that all children who are born with the venereal disease, die in a short time; or that those who escape an early death, live in a miserable and languishing condition, and rarely attain the age of puberty." From this observation we might be led to infer, that he had seen many unequivocal cases of hereditary syphilis. But what he adds, renders this extremely doubtful; for he says, "unquestionably, when a woman infected with the venereal disease brings forth a child, whose skin is faded and withered, whose epidermis is stained or marked with livid and black spots, it is evident that these symptoms are those of the venereal disease." I must remark, that this opinion appears to me to be no better founded than the opinion of those who, on seeing a woman bring forth a dead and half putrid child, ascribe this state of dissolution to the syphilitic

virus; at least I perceive, in neither case, any positive characteristic symptom of syphilis. Besides, the evident symptoms of syphilis which appear on children some days after birth, are, as I have already stated, so equivocal in their origin, that they cannot be ascribed to an hereditary syphilitic infection, contracted in the uterus.

But the case I mentioned in the fourteenth chapter, appears to me to place the question of hereditary syphilis beyond the possibility of doubt. In my opinion, it affords the most positive proof that syphilis may be, and actually is, communicated sometimes by the semen of an infected father, who has the seeds of the disease in his system, though he has no syphilitic complaint in the organs of generation. Consequently, there is great probability that the disease may be communicated to the fœtus in utero by a mother, who has the virus lurking in her system; children, therefore, receive the syphilitic infection, 1st. By the semen of their father, or during their existence in utero; this constitutes the hereditary syphilis. Hence, as asserted by some writers, new born children sometimes come into the world bearing the marks of this disease.

2d. It more frequently happens, that they are infected during their passage through the vagina affected with syphilitic ulcers. In these cases, the period when the symptoms appear is, generally, within eight days after birth; this is the *Syphilis connata*.

3d. Children contract the disease from their nurses by the nipples, or by the kisses from an infected mouth. This is, in my opinion, the most frequent manner in which children are infected, especially in the large towns in Europe, where the rich and indolent females, preferring their own ease and fleeting pleasures to the cares

of suckling their own offspring, abandon them to mercenary and very often infected nurses.

Though no part of the body is exempt from the ravages of the syphilitic virus, it is especially the mouth, the eyes, the navel, the anus, and the organs of generation, which are affected in children; and consequently the most frequent effects of the virus are aphthæ, ophthalmias, erosions of the cornea, blennorrhagias, pustules, or ulcers on the skin; and where the disease has had time to make further inroads, ulcers of the extremities, with erosion and loss of the nails, &c. Of all these symptoms, corroding ulcers of the mouth and navel prove the most generally fatal to children.

In whatever manner the child may have contracted syphilis, if the disease appears while the child is at the breast, we must remember the wise precept of Hippocrates, *Lactantium cura posita est tota in medicatione nutricum*. Hence the nurse must go through a course of mercury; and in this instance, it is often best to administer the mercury by frictions. But, in every instance, we must never lose sight of the observation made by Doublet, that children suffer greatly, and even perish, when the mercury acts too violently on the nurse; they are then tormented by colics and diarrhœas, and are continually crying. We must be still more circumspect in the treatment of mothers and of nurses who suckle a child. It is rarely necessary to employ more than four ounces of mercurial ointment: the common drink should be rice water or thin barley water, which may be also given to the child. When the symptoms are severe, the decoction of sarsaparilla should be prescribed; the strictest attention must be paid to the diet. The whole treatment will last two months and a half,

and very rarely three months; but there are cases where frictions will not suffice. Here the oxygenated muriate of mercury, given with milk, has afforded the greatest benefit. But in all instances, the exhibition of mercury must be suspended when the child begins to complain.

The precautions to be observed for syphilitic children, while the mother or nurse is under treatment, are, to keep the children very clean and dry, especially in hospitals; to let them sleep by themselves; to place them in an airy room, where few are assembled; to wash them, after each stool, in a small bathing tub, containing warm water, which is to be often renewed.

If aphthæ occur in the mouth, we must carefully ascertain whether they are really syphilitic, or whether they are not rather the effect of the acrimony of the saliva, produced by the mercury. In the former instance, they are to be touched twice or thrice every day with a camel's hair pencil, or a piece of lint, dipped in a watery solution of the oxygenated muriate of mercury. In the latter, the *Linctus ad Aphthas*, ph: syph. is preferable. The muriate of mercury, in powder, should be applied to syphilitic ulcers on other parts of the body. Inflamed eyelids are to be washed, and afterwards rubbed twice a-day with mercurial ointment.

When the children are too weak to take the breast, or when the syphilitic ulcers of the mouth render sucking too painful, they should be nourished with cow's, goat's, or asses' milk, till they have acquired sufficient strength to take the breast of a nurse who has begun a course of mercury: the warm bath and wine will contribute to accelerate the restoration of strength. If the ulcers at the corners or on the inside of the mouth prevent sucking, they should be touched with a solution

of the oxygenated muriate of mercury. For the same purpose, the super-oxygenated muriate of potass may be employed.

If the nurse's nipples are ulcerated, or if any other circumstance prevents the effects of the mercury from being communicated to the child by the nurse, or if the child is weaned before the disease is discovered, a she ass or she goat must be substituted, a portion of the animal's body being shaved and rubbed with mercurial ointment, and then the animal's milk is to be administered to the infected child. There exists a family at this time in Europe, in which not a child has arrived to a certain age without the previous adoption of the abovementioned treatment. If the child is older, mercurial frictions, or some preparation of mercury internally, may be administered. The oxide of mercury prepared by trituration with sugar or honey, appears the best adapted to the taste and constitution of children, or else the muriate of mercury; for it is astonishing how well most children bear the latter preparation.

I must here remark, that children are often affected with warts and other excrescences about the anus, genital organs, and on the other parts of the body; which are not owing, as is generally supposed, to the syphilitic virus, but to a prevailing acidity in the *primæ viæ*. The practitioner who is not aware of this distinction, and who considers them as syphilitic, will often be disappointed in the cure; and by an unnecessary exhibition of mercury, will endanger the health and even the life of the child, and often render the parents miserable for life.

CHAPTER XIX.

Chemical remarks on the principal preparations of Mercury employed in the cure of Syphilis.

THE mercury destined for medicinal purposes, in forming the different preparations, should be very pure. The greater part of the mercury of commerce is brought from Istria, in Frioli, and from the Palatinate, and passes through the hands of the Dutch, who frequently adulterate it with lead and with bismuth, without it suffering any sensible change in its fluidity or metallic lustre. But the physician who has the health of his patients at heart, will never employ mercury, either internally or externally, without being satisfied that it is perfectly pure. For if we employ this metal when impure, we shall not only be disappointed in the expected effects, but may even cause great injury to the patient. As there is great difficulty in being fully satisfied of the purity of the mercury in the shops, I am of opinion, that every practitioner ought to purify it himself, or ought to employ none but what is purified in the manner which we shall propose.

Mercury is found in the mines either native, when it is termed virgin quicksilver; or mineralised, and then it is called the ore of mercury, from which it is afterwards separated by distillation.

These ores of mercury are of many kinds, and of various forms. Native cinnabar, however, contains the largest proportion of mercury. Though many authors

recommend the native cinnabar as a medicine, it is well ascertained that it is often united with arsenic, or with other foreign substances. It is consequently incurring a great risk, to employ native cinnabar, either internally or externally. Though it is sometimes of a more beautiful colour than the factitious cinnabar, we can always calculate with more certainty on the latter, when well prepared, for medicinal purposes.

The mercury, in cinnabar, or in the other ores of this metal, being commonly mineralised by sulphur, the process for separating it consists in uniting with the ore, some substance which has a greater affinity for the sulphur than for the mercury; such as alkaline salts, lime, iron, the scorix of iron, &c. Hence, if the ore of mercury be mixed with any one of the abovementioned substances, (of which the cheapest will always be preferred), and then exposed to the fire in a distilling apparatus, the sulphur will unite with this substance, and the mercury being set at liberty will rise in the form of vapour, and pass into the recipient.

The dealers have unfortunately learnt the art of adulterating mercury, by mixing lead, with which it readily unites. This fraudulent practice is rendered more difficult of detection, by the addition of bismuth; for the amalgam formed by this addition is more fluid, and preserves much better the metallic and silvery lustre of mercury. It is then evident, that the colour and brilliancy of mercury are not always certain indications of its purity; and we must not depend on the common mode of purifying mercury, which consists in forcibly pressing it through a leathern bag; for the amalgam composed of mercury, lead and bismuth, is often so perfect, that though the alloy forms one fourth of the

whole mass, a very small portion of these foreign articles remains in the bag through which the mercury has passed.

By washing the mercury in concentrated vinegar, the lead will be dissolved in the vinegar, which will acquire a sweet taste; but the whole of the lead is not dissolved by this operation.

The only satisfactory mode of purifying mercury, is by distillation. Iron vessels are considered the best adapted, for iron is the only metal which is not acted on by mercury, and there is moreover no danger of these vessels being broken during the process, as might happen to those of glass, on account of the great expansion the mercury undergoes in the operation. The higher the mercury rises before it is condensed, the greater the certainty of freeing it from the particles of lead, which by this precaution are prevented from passing into the recipient. The vessels used in this operation ought then to be an iron pot, with a long narrow neck of the same metal, resembling a gun barrel. But for the more perfect and more ready condensation of the mercury, which rises in the form of vapour, and for obtaining it perfectly pure, in case any particles of lead or bismuth should be carried along with it in the distillation, a piece of linen should be fastened to the extremity of this bent tube, which should be plunged two or three inches deep in vinegar. By this method, the whole of the mercury is obtained; the operator is not exposed to the danger of explosion, and moreover the mercury is entirely freed of all the adventitious particles of lead or bismuth which might have passed over with it, and which being dissolved in the vinegar, the mercury is found perfectly pure at the bottom of the vessel.

Mercury may likewise be obtained in a very pure state, by distilling the oxygenated muriate of mercury, or any other mercurial salt, with any substance which has a stronger elective attraction for the acid than the mercury.

The following are the characters of pure mercury: 1st. When poured on a wooden table, the globules must preserve their spherical figure, and never run into threads or lines. 2d. It must retain a brilliant surface, without being covered with a pellicle. 3d. When agitated with water, it must not render it black or dirty. 4th. When agitated or digested with vinegar, it ought not to impart a sweetish taste. 5th. When placed in an iron spoon over the fire, it ought to evaporate completely, without leaving any residuum.

2. *On mercurial Oxides.*

Mercury is converted into a gray or blackish oxide, by trituration, and the access of vital air or oxygen gas.

1st. By triturating mercury with grease, or other fixed animal or vegetable oils, under the name of unguentum hydrargyri griscum.

Mercurial ointment is commonly prepared by triturating the mercury with hog's lard, and turpentine. This method is highly improper; for the ointment thus prepared, soon produces, especially in persons whose skin is irritable, painful inflammatory pustules, which prevent the further continuance of the frictions. Hence it is better to prepare the mercurial ointment, by triturating purified mercury with fresh hog's lard, that has been repeatedly washed and cleaned in pure water, with-

out the addition of the turpentine. The trituration must be continued for several hours after the globules of mercury have disappeared, in order to insure its being perfectly reduced to the state of a dark gray oxide. The ointment must be kept in a cool place, not only to prevent its becoming rancid, but to prevent its melting, which would occasion a separation and consequently a precipitation of the mercury to the bottom of the vessel.

But, notwithstanding these precautions, there are many persons whose skin is so extremely irritable, that they cannot bear the application of the ointment, even when prepared in the manner we have just described. The great propensity the lard has to become rancid, especially in warm seasons and in warm climates, greatly contributes to this inconvenience. On these occasions it will be proper to mix with the mercurial ointment, a little white cerate recently prepared; or to prepare the ointment with mercury and the butter of the cocoa, formed by boiling the nut in water. But perhaps it will be more advantageous, to prepare the ointment by triturating the mercury with mutton suet till it is completely oxidized, and then to add fresh purified hog's lard. The suet is harder, and does not so readily become rancid.

The manipulations generally adopted for preparing the blue mercurial ointment, are very defective, being commonly performed in an iron mortar, with a pestle of the same metal; but this is a fatiguing and tedious operation, requiring much labour and attention.

This slowness in the operation is owing to the vessel being concave, and presenting a very small surface. Consequently the mercury under trituration presents

but a small surface, and its molecules cannot remain long separated, by reason of the affinity of aggregation: hence the atmospheric air touches the mercury in fewer points. This metal absorbing less oxygen, is therefore less rapidly oxidated; for notwithstanding the assertion of those who deny the existence of oxygen, without it the mercury would not be oxidated, the lard which is added acting merely as an auxiliary; it serves only to divide and multiply the points of contact between the molecules of mercury and the air.

I am of opinion, that this preparation would be more advantageously made, by tritulating or incorporating the mercury with animal fat, or the butter of cocoa, &c., on a porphyry or a marble table, with a mullar of the same, as the painters prepare their colours. Perhaps it would be more convenient previously to reduce the mercury to a gray oxide, by a trituration long continued in an apparatus made on purpose; or else by adding to the mercury, according to the advice of professor Fourcroy, before it is mixed with the lard, a little of the red oxide or of the oxygenated muriate of mercury, which by the trituration yields to the metallic mercury a portion of its oxygen, and thus greatly diminishes the labour.

Citizen Dupont, the apothecary, has lately published in the *Journal de Pharmacée*, No. 8, page 60, a process preferable to the one hitherto employed. He recommends, that the ointment should be prepared in very shallow mortars, using broad pestles, and the mercury to be added in divided portions; for example, three ounces of mercury, with one ounce of lard, to be placed in a large shallow mortar; after some minutes trituration, by means of a very broad pestle, the mercury pre-

sents a very extensive surface; and being small in quantity, and having no tendency to reunite, for it adheres to the sides of the mortar, and as the layer is very thin, the absorption of the oxidating principle will be rapid, for the points of contact between the mercury and the atmospheric air are greatly multiplied. At the end of half an hour, this portion of mercury being completely oxidated or extinguished, is to be removed and set apart. The same operation is to be repeated on a similar quantity of mercury, and if the process be continued for eight hours, forty-eight ounces of mercury will be completely extinguished, to which the residue of the lard is to be added so as to make the weights equal; which will give six pounds of strong mercurial ointment, in which not a particle of unoxidated mercury can be discovered. These six pounds of strong mercurial ointment would have required a fortnight, if a larger quantity of mercury had been employed at once: for the layer being much thicker, the oxidated portion is that which is in contact with the atmosphere; while that which is not, unites at the bottom, and receives no impression from the air, since it is defended by the portion already oxidated, which occupies the upper surface.

I shall take notice of the other mercurial ointments, made with other oxides, or mercurial salts, in the course of this chapter.

It has hitherto been a problem among practitioners engaged in the cure of syphilitic complaints, to discover a mode of cleaning the linen worn during a course of mercurial frictions. It is difficult to form an idea of the quantity of linen destroyed by this treatment; it is only in hospitals, where numbers are treated in this way, that it can be duly appreciated.

It is fully perceived when, through ignorance, or want of proper advice on the part of the physician, the patients wear during the course, fine linen, and send it to be washed with other linen in the usual way.

It inevitably follows that the whole of this linen will be stained; and every stain, in the course of time, will rot the linen.

Another inconvenience which frequently results from the use of mercurial frictions, is, that it leads to a discovery of the disease in persons who may be extremely anxious to conceal it. How often have such stains been the unhappy source of trouble and disunion in families!

Citizen Vauquelin, inspector of the mines and professor of mineralogy, has communicated to the public, in the third volume of *la Médecine Eclairée*, &c. published by Fourcroy, a certain and cheap process for bleaching the linen stained by the preparations of mercury and of lead: we shall transcribe it in his own words.

“Having been desired to remove the stains from a number of fine shirts, pocket handkerchiefs, towels, &c. made of linen and of cotton, I operated in the following manner.

“I first washed some of the shirts in a ley composed of fifty parts of water, one of potass, and one and a half of quick lime; when all the grease was dissolved by the alkali, and nothing remained on the linen but the oxide of mercury, (for the stains were occasioned by mercurial ointment), I then plunged them with others just returned from the washer-woman, in a tub containing a very strong liquor, composed of twelve parts of water and one of oxygenated muriatic acid, at the temperature of 55° Fahren. I allowed them to remain

in this liquor till all the stains were removed; which requires more or less time, according to the quantity of matter to be dissolved. If more linen has been put in than can be bleached by the oxygenated muriatic acid, after the linen has been taken out of the first liquor, a twentieth part of acid should be added, and the linen put in again; I recommend that the linen should be removed before the acid is added; for the acid not mixing intimately, might burn the linen on which it lodged.

“When all the stains have disappeared, the linen should be washed in spring water, and passed through suds to remove any disagreeable smell; and then if we wish to make the linen very white, it may be plunged for some hours in water containing 0,01 of sulphuric or sulphurous acid. These are the proportions which I have found the most successful: they may be varied according to the quantity of linen and the number of stains to be bleached; but it is generally better to wash and plunge the linen twice, than to employ the ley or the acid too strong, for then the linen might be burnt.*

“This application of chemistry to domestic economy, removes the alternative patients were in, of either losing, by the antivenereal course, costly linen, or to wear it stained or ragged, which few are willing to suffer.”

The white oxides of mercury are not pure oxides. The oxygenated muriate of mercury, precipitated by potass

“* When new wooden vessels are employed, the precaution should be taken of putting in, some hours before, some oxygenated muriatic acid, in order to destroy the colour. Every particle of iron must be carefully avoided.”

or soda, or by the carbonate of potass or of soda, is not completely decomposed, as has been well observed by citizen Bayen, but contains a good deal of muriatic acid, with excess of the oxide. Almost half the precipitate by potass is muriate of mercury. The same salt, precipitated by the carbonate of ammonia, forms a triple salt, composed of muriatic acid, ammonia, and the oxide of mercury. On precipitating the oxygenated muriate of mercury by lime water, the precipitate is the oxide of mercury, with very little muriatic acid. The orange or yellow coloured powder, mixed with it, is calcareous earth. From three drachms of oxygenated muriate of mercury, precipitated by lime water, citizen Bayen obtained two drachms and seventeen grains of mercurial oxide, eight grains of muriate of mercury, and thirty-two grains of red calcareous powder. From these experiments it is evident, that lime water decomposes the oxygenated muriate of mercury more completely than the alkalies, and precipitates it in the form of an oxide; and ammonia, or the muriate of ammonia, decomposes the same salt less completely than the fixed alkalies, and precipitates the greater part in the form of a triple salt, properly termed the ammoniaco-muriate of mercury, or ammoniacal muriate of mercury. It should be remarked, that the precipitate by lime water is reduced to running mercury, without any addition.

The solution of mercury in nitric acid, precipitated by the carbonate of potass, is a nitrate of mercury with excess of the oxide. Half an ounce of this precipitate contains, according to the experiments of the same chemist, ten grains of nitric acid. The same solution, precipitated by ammonia, yields a gray coloured precipitate, composed of nitric acid, ammonia, and the oxide

of mercury. The same solution, precipitated by potass, affords a yellow coloured powder, formed of nitric acid with excess of the mercurial oxide. The same solution, precipitated by lime water, is of an olive colour, and always contains a portion of acid.

The red oxide of mercury, (*Oxydum hydrargyri rubrum*, *vulgo Mercurius calcinatus*, *calx hydrargyri rubra*, *Mercurius præcipitatus per se*,) is prepared in two different ways. In one, as much mercury as will occupy one or two lines in depth, is poured into a flat bottomed matras; the neck of the vessel, heated by a lamp, is drawn to a capillary tube, and the end is broken off so as to permit the access of air. The matras is then placed in a sand bath, heated so as to boil the mercury gently, in which state it is to be kept, till the mercury is reduced to a red powder, termed *oxydum hydrargyri rubrum per se*. The other method consists in the simple evaporation of a solution of mercury in nitric acid, and is the least expensive. This is the *oxydum hydrargyri acido nitrico confectum*.

The yellow oxide of mercury, sulphate of mercury with excess of the oxide, see page 351.

3. On Mercurial Salts.

The mercurial salts are the oxides of mercury combined with an acid.

1. MURIATE OF MERCURY. (*Murias hydrargyri*, *vulgo calomel*, or *mercurias dulcis*.) This salt, prepared as it commonly is, by sublimation, is a different remedy in different countries, and in the different shops, and even in the same shop at different times. On this ac-

count I never use it, but always prefer the muriate of mercury prepared by precipitation.

The celebrated Scheele has communicated a new method of preparing this salt by precipitation, by which it is always obtained of the same quality. Though it was known long before the time of Scheele, that mercury would unite with the muriatic acid, by precipitation, little use was made of it in practice, because the proportions were probably not well ascertained, and it was considered uncertain in its effects. I believe I shall afford satisfaction to many of my readers, by giving an exact description of this new process.

Half a pound of mercury, and the same quantity of nitric acid, diluted with an equal quantity of distilled water, are to be poured into a small vessel with a long neck, and the mouth is to be stopped with paper. The vessel is to be placed in a hot sand bath; and some hours after, when the acid exhibits no further action on the mercury, the heat must be raised till the solution is ready to boil. This degree of heat is to be continued for three or four hours, care being taken to stir the vessel occasionally, and then the solution should boil gently for a quarter of an hour. At the same time, four ounces and a half of the muriate of soda are to be dissolved in six or eight pounds of water. This solution, while boiling, is to be poured into a large glass vessel, to which the nitric solution of mercury above described, is to be gradually added, likewise in a state of ebullition; the whole being stirred continually. As soon as the precipitate has subsided, the clear supernatant liquor is to be decanted, and the precipitate is to be repeatedly washed with warm water, till it ceases to communicate any taste to the water. The precipitate

thus obtained is to be placed on a filter, and afterwards dried by a moderate heat.

It might be imagined, that when the nitric acid ceases to effervesce with the mercury, that it is saturated; but this is far from being the case; for the oxide, on the heat being increased, is still capable of dissolving a considerable quantity.

It is necessary to boil the solution of mercury for about fifteen minutes, to keep the nitrate of mercury in a fluid state, for it is much disposed to crystallize. Some of the mercury generally remains undissolved. but it is more advantageous to add too much than too little, for the more completely the solution is saturated, the more muriate of mercury will be obtained.

The solution of mercury should be gently and gradually added to the solution of the muriate of soda, least any undissolved globules of mercury should drop in.

Two ounces of the muriate of soda would be sufficient to precipitate all the mercury; but if only this quantity is employed, some particles of the oxygenated muriate of mercury, which the water alone cannot completely separate, might adhere to the precipitate. It is unquestionably owing to this cause, that what has been termed the white precipitate of mercury always proves corrosive. The muriate of soda, like the muriate of ammonia, possesses the property of dissolving a large quantity of the oxygenated muriate of mercury. On this account, it is right to employ four ounces and a half of the muriate of soda, in order to separate entirely the oxygenated muriate of mercury from the precipitate.

The following circumstances prove that the precipitate is a proper and real muriate of mercury, or sweet

mercury: 1. It is perfectly insipid. 2. The author having sublimed it, and examined what sublimed first, and which would have been corrosive, if the precipitate had contained any portion of the oxygenated muriate of mercury, which is more easily sublimed than the muriate of mercury, (*mercurius dulcis*), whereas what did rise during the sublimation was the pure muriate of mercury, exactly resembling that obtained in the usual way. 3. He mixt this precipitate with a fourth of its weight of crude mercury, and then sublimed it; conceiving that if it contained an overplus of corrosive sublimate, it would unite with a fresh quantity of mercury. But this did not happen: the crude mercury which he employed lost none of its weight. It is well known, that the caustic alkalies, and lime water, impart a black colour to the muriate of mercury: the same occurred with that prepared according to the foregoing process.

The author adds: I doubt not that the process I have just described is more advantageous than the one which has hitherto been employed, 1st. Because this muriate of mercury is prepared with less difficulty, at less expense, and without employing the oxygenated muriate of mercury. 2d. As there is no reason to apprehend that it contains any thing corrosive, provided it has been sufficientlyedulcorated, it may be given with perfect safety. 3d. The operator is not exposed to the noxious dust which rises during the trituration of the corrosive sublimate according to the old method. 4th. This muriate of mercury is always in a finer powder than the common *mercurius dulcis*, because the latter cannot be rendered equal in this respect, though ground ever so long.

The antivenereal drops, so famous in Amsterdam, have been analysed by Scheele. He discovered that they were composed of the muriatic acid, saturated with iron, and mixed with a small quantity of mercury.

The muriate of mercury, mixed with lard or white cerate, or with honey, in many cases forms an useful ointment instead of the blue ointment, which soils the linen, and thus frequently betrays the patient. (See *Unguentum et mel ex Muriato hydrargyri*, ph: syph.) It answers likewise in powder, mixed with saliva, for frictions. Mixed with lime water, it forms the *Lotio syphilitica nigra*, or *lotio ex muriate hydrargyri*, ph: syph.

The ammoniacal muriate of mercury, (*Murias hydrargyri ammoniacalis*, vulgo *white precipitate*, or *mercurius præcipitatus albus*,) is, according to the observations of Professor Fourcroy, a real triple salt, composed of the oxide of mercury, of acid, and of ammonia. It is commonly prepared by dissolving one pound of the muriate of ammonia and one pound of the muriate of mercury in distilled water, and adding to this solution one pound of the carbonate of potass. The precipitate is to be repeatedly washed. The authors of the Edinburgh Pharmacopœia direct the oxygenated muriate of mercury, for forming this precipitate.

It is, in every instance, a triple salt, composed of muriatic acid, oxide of mercury, and ammonia, the latter being always precipitated with the other two. The best mode of preparing it consists in dissolving, by a gentle heat, one ounce of mercury in nine or ten scruples of nitric acid, then diluting the solution with one pound of distilled water, and then adding a solution of two scruples of the muriate of ammonia in four ounces of

distilled water; to which is to be immediately added a solution of the vegetable alkali (carbonate of potass) in water, so as to obtain a full quantity of the precipitate. Care must be taken not to add too much of this last solution, for then the precipitate would acquire a yellow colour. This white precipitate should be washed in distilled water, and is principally used in making ointments.

3. The oxygenated muriate of mercury, (*Murias hydrargyri oxygenatus, vulgo corrosive sublimate.*) This salt, as it is found in the shops, prepared by sublimation, is liable to all the objections I made against the muriate of mercury prepared by sublimation. It is rarely of the same quality, though prepared in the same way; besides, it is sometimes adulterated with the white oxide of arsenic. The pure oxygenated muriate of mercury, obtained by sublimation, has a radiated texture, and mixed with lime water it produces an orange colour; while that which is adulterated with arsenic has a granulated texture, and strikes a black colour with lime water. It is better, and more easily prepared by crystallization, when it is always of the same quality. This process is from citizen Berthollet, and is performed in the following manner.

Dissolve the mercury in nitric acid, dilute the solution with an equal quantity of distilled water, then add as much oxygenated muriatic acid till the odour of the latter is distinctly perceived. Evaporate gently, and preserve the regular white crystals for use.

Thirty grains of the oxygenated muriate of mercury, mixed with one pound of fresh lime water, forms an orange coloured mixture, long known by the name of

aqua phagedenica, (*lotio syphilitica lutea*, or *luteo e muriate hydrogyri oxygenato*, ph: syph.)

The oxygenated muriate of mercury is frequently employed in the mercurial bath, see the succeeding chapter; or it is given internally, dissolved in distilled water, or in alcohol.

The syrup of Cuisinier is composed of a strong decoction of sarsaparilla, to which a little senna is added, when the decoction is nearly finished, and then one or two grains of the oxygenated muriate of mercury to every pound of the decoction, and then sweetened with sugar. The dose is four table spoonfuls a day.

4. The nitrate of mercury, (*Nitras hydrargyri*,) is a salt composed of the nitric acid and mercury, and crystallized by evaporation. The saturated solution of mercury in nitric acid, is termed fluid nitrate of mercury, or nitric solution of mercury. (*Nitras hydrargyri liquidus, seu acidum nitricum hydrargyratum*.)

If this solution of mercury in nitric acid be evaporated, by boiling it in a large glass vessel, till it forms a dry mass, and then the heat increased, constantly stirring it with a glass tube till the mass acquires a red colour: this is termed the red nitrate of mercury. (*Nitras hydrargyri ruber, vulgo mercurius corrosivus ruber, seu mercurius præcipitatus ruber*.)

If this red powder is exposed to a continued heat, and constantly stirred, all the nitric acid will gradually exhale, leaving a red powder, which is no longer a metallic salt, but a simple oxide, which differs in no respects from the red oxide of mercury per se. The nearer its colour approaches that of saffron, or ruby, or of a bright red, the more completely is the acid disengaged; but the more it approaches a yellow orange

colour, the more does the acid abound. All the acid cannot be disengaged but by exposing to a pretty strong heat. To deprive it entirely of the acid, it must be exposed in a cucurbit or matras to a gradual heat till the red vapours cease and the mercury begins to revive.

The powder called in the new Edinburgh Pharmacopœia, *Pulvis mercurii cinereus*, is prepared in the following manner, according to the directions of Dr. Black. Take equal weights of mercury and weak nitric acid. When the mercury is dissolved, dilute the solution with pure water, and add of ammonia as much as is sufficient to separate the mercury perfectly from the acid; then wash the powder in pure water, and dry it.

This powder is not a pure oxide of mercury, but a triple salt, like all the other mercurial precipitates made by ammonia. This salt is composed of nitric acid and ammonia, united and precipitated with the gray oxide of mercury. The reason why it assumes this colour is, because a portion of the oxygen, which was combined with the mercury, is disengaged by the addition of the alkali: it is an oxide of mercury, united with the nitrate of ammonia, (*Oxydum hydrargyri griseum cum nitrate ammoniacæ.*) The salt obtained by evaporating the supernatant liquor is likewise a triple salt, but it is white. It is the *nitras hydrargyri ammoniacalis*.

The white drops of the famous Dr. Ward, of London, ought, according to the opinion of some chemists, to be classed here; being composed of mercury dissolved in the nitric acid, combined with ammonia; or, according to others, with the muriate of ammonia. To obtain this preparation in a saline form, take the ni-

tric acid, diluted with an equal quantity of distilled water, and add sixteen ounces of the liquid carbonate of ammonia; and when the effervescence has ceased, add eight ounces of purified mercury, or as much as can be dissolved at the heat of a sand bath. Then evaporate the solution, to obtain the crystallized salt, and keep it in a well corked bottle.

The unguentum citrinum is an excellent remedy; there are various modes of preparing it. I think that directed in the Pharmacopœia syphilitica, deserves the preference. Dissolve one ounce of mercury in two ounces of nitric acid; melt four ounces of hog's lard with two ounces of olive oil; and when they are nearly cooled, add the nitric solution, keeping the whole constantly stirred. The oil is fixed by the oxygen, according to the observation of Fourcroy.

5. The sulphate of mercury, (*Sulphas hydrargyri*), is prepared by digesting twenty-four parts of the yellow sulphate of mercury with excess of the oxide, with thirty-six parts of sulphuric acid, for twenty-four hours.

This salt, thus prepared, forms the basis of the famous liquor of Mitter, at Montpellier. Take sixty grains of the sulphate of mercury; add, the mass being well triturated in a glass mortar, two drops of water every minute, till the salt is perfectly dissolved, then add enough distilled water to fill the bottle.

The yellow sulphate of mercury, with excess of the oxide, (*Sulphas hydrargyri luteus cum excessu oxydi, vulgo turpethum minerale seu Mercurius emeticus flavus*), is made by dissolving the mercury in an equal quantity of boiling sulphuric acid. On this white solution, hot distilled water is to be poured, whence a yellow preci-

pitate is formed, which is to be repeatedly washed in pure water.

6. The tartrate of mercury, (*Tartris hydrargyri*,) is a combination of mercury with the tartarous acid. This acid exerts little or no action on crude mercury, but it unites very readily and perfectly with the oxides of this metal. The tartrate of mercury is prepared, 1. By precipitating the mercury from its solution in the nitric acid, by means of the tartarous acid: this is the yellow tartrate of mercury, (*Tartris hydrargyri præcipitatus flavus, seu Pulvis Constantinus*.) 2. By precipitating the mercury, dissolved in the muriatic acid, by the acidulous tartrate of potass, or purified tartar: this is the white tartrate of mercury, (*Tartris hydrargyri præcipitatus albus, seu Pulvis argenteus*.) 3. By precipitating the mercury from its solution in the nitric acid, by the acidulous tartrate of potass: this is the *terra foliata mercurialis* of Dr. Pressavin, who introduced it into practice under this name. The cream of tartar, or purified tartar, as it is commonly called, is not, as was long supposed, a pure acid, but a salt composed of potass with excess of an acid, termed, by the modern chemists, the tartarous acid. The method recommended by Pressavin for the preparation of the *terra foliata mercurialis*, consists in precipitating the mercury from its solution in the nitric acid, by means of the vegetable alkali; then boiling the precipitate with a solution of the acidulous tartrate of potass in water, till the oxide of mercury becomes perfectly white. The tartarous acid acts powerfully on the oxide of mercury, especially when the mercury has been dissolved in the nitric acid. The tartrate of mercury, thus prepared, is a very acrid preparation, which acts with great power

on the human system, and ought therefore to be employed with great caution.

7. The acetite of mercury, (*Acetis hydrargyri*,) was first introduced into practice by Keyser. He began by reducing the mercury to the state of a gray oxide, by means of continued trituration; he then united it with vinegar, and made it into pills with honey. This mercurial salt is now more readily and expeditiously prepared, by adding to a saturated solution of mercury in the nitric acid, diluted with an equal quantity of distilled water, a solution of the acetite of potass. The potass unites with the nitric acid; and the acetous acid, combining with the mercury, is precipitated in the form of a beautiful pearl-coloured powder. Another method of preparing the acetite of mercury quickly, is, to boil the red oxide of mercury, prepared by the nitric acid, in vinegar till it is perfectly dry.

8. The sebate of mercury, or mercury united with the sebacic acid, (*Sebas hydrargyri*,) has not hitherto been employed for the cure of syphilis.

9. The phosphate of mercury, (*Phosphas hydrargyri*,) is seldom used, principally because the combination has been found very difficult. Many chemists have even doubted the possibility of effecting it. It may be obtained by the following process.

Take twenty-four grains of mercury; dissolve them in the nitric acid. Then dissolve thirty grains of phosphoric acid in a few ounces of distilled water: mix them together in a glass jar, and expose them to a heat strong enough to expel the nitric acid. Then dissolve the opake mass which remains in distilled water, in which you have previously dissolved seven or eight grains of phosphoric acid.

The phosphate of mercury having been lately extensively employed in practice in Germany, various modes of preparing it have been tried: that recommended by Trommsdorf, deserves the preference. He precipitates the nitrate of mercury by means of the phosphate of soda. This precipitate is extremely pure. It is to be washed in hot water, and dried in the shade.

10. *The red sulphureted oxide of mercury, or cinabar*, is a preparation rarely made by the apothecaries, but which is purchased of the manufacturers. It is successfully employed in mercurial fumigations. The *sulphuretum hydrargyri stibeatum*, (*Æthiops antimonialis Huxhami*), is composed of four parts of mercury, two of sulphur, and three of the native sulphuret of antimony (vulgo crude antimony), powdered and mixed together. Others prepare it by triturating two parts of the black sulphuret of antimony with one of mercury; and the Swedish Pharmacopœia directs, for the same preparation, to triturate well two parts of the hydrosulphureted oxide of antimony (*kermes mineralis*) with one of crude mercury.

CHAPTER XX.

*Practical Remarks on the Effects and Administration of the Principal Preparations of Mercury in the Cure Syphilis.*1. *On Crude Mercury.*

CRUDE or metallic mercury appears not to act on the human system, whether in health or disease. It is employed, when purified, for preparing the various mercurial salts and oxides. It would seem, however, from some facts, that metallic mercury boiled in water imparts to it some portion of its virtues, or some principle capable of acting on the human system. A practitioner has informed me, that he cured a syphilitic complaint by a simple decoction of mercury in water, by administering daily one bottle of the decoction, regularly prepared every day with fresh mercury. I doubt the fact. While in Germany, I saw this decoction given to children for the cure of worms: but I have never been able to determine with precision the efficacy of this remedy. A friend of mine, a surgeon in London, has communicated to me a fact, which deserves attention; a dog was radically cured of the mange, for which a variety of remedies had been ineffectually employed, by the use of this decoction, given to him as his common drink. Some authors have asserted, that mercury, after having been boiled in water, lost its antisiphilitic properties. But all these facts require further confirmation.

2. On the Oxides of Mercury.

It is important for the practitioner to observe, in general, that oxidated mercury acts with more or less energy on the system, in proportion to the degree of oxidation; that is, in proportion to the quantity of oxygen combined with the metal. Hence we perceive, according to this scale, that the dark gray oxide of mercury is the mildest; next comes the brown oxide of mercury; then the red oxide of mercury; and lastly, the yellow oxide of mercury, which is the most acrid of all the mercurial oxides, and which consequently exerts a more powerful action on the human system.

It must be further remarked, that the dark gray oxide of mercury, exposed to the rays of the sun, is reduced to the metallic state; and that consequently the various preparations of mercury, made with this oxide, should be kept in a dark place, or in porcelain jars. The same inconvenience is not to be apprehended in regard to the other oxides of mercury, which are never reduced by the mere action of the solar rays.

A. The most common, and the best preparations made with the dark gray oxide of mercury, (*oxydum hydrargyri griseo nigrum*), are

1. The oxide of mercury with mucilage.
2. The oxide of mercury with resin.
3. The oxide of mercury with sugar or honey.
4. The oxide of mercury with liquorice.
5. The oxide of mercury with lard, or the blue mercurial ointment.

1. The oxide of mercury with mucilage, (*hydrargyrum gummosum*). This preparation, in which the mercury, reduced to the state of a dark gray oxide, is combined with a gum or vegetable mucilage, was invented and introduced into practice about thirty years ago, by Professor Plenck. He at first prescribed it in the form of mixture with water; but this having been found inconvenient, from the mercury not remaining sufficiently suspended, he proposed, some time after, to form this medicine into pills. For this purpose he directs, that two scruples of well purified mercury should be rubbed with three drachms of powdered gum arabic, and a sufficient quantity of the conserve of blackberries, in a marble mortar, till the mercury has disappeared; that after the trituration has been continued for half an hour more, the mass should be mixed with half an ounce of of the crumbs of white bread, and formed into pills, each weighing three grains; the patient to take six of these pills, morning and evening. This form is certainly less inconvenient; but it is still liable to another objection, that these pills, like all those made with crumbs of bread, become so hard, when kept for any length of time, that they frequently pass through the stomach undissolved, and appear in the stools. This inconvenience may be obviated, by preparing them with starch instead of crumbs of bread, as I have directed in the Ph: syph. (See *Pilule ex hydrargyro gummoso*.) Provided this attention is paid, they must be considered as a valuable acquisition in the Pharmacopœia syphilitica.

2. The oxide of mercury with resin, obtained by the trituration of mercury with liquid resins or balsams, as turpentine, the balsam of Peru, &c., is a useful remedy in many cases. The union of the mercury with the

turpentine, is facilitated by the addition of a few drops of the oil of turpentine: it is to be made into pills, (see (Ph: syph.) This composition, however, frequently excites griping and diarrhœa. This proceeds, in some degree, from the badness of the turpentine, and the best ought therefore to be selected; it is the liquid resin that flows from the larch (*Pinus larix*,) and generally termed terebinthina larigna, or Venice turpentine. According to circumstances we might employ, instead of the turpentine, the liquid resin of the *pinus balsamea*, or the Canada balsam of commerce, or else the balsam of Tolu, or of Peru, which may be mixed with some vegetable powder; and this composition may be given every evening in a pill of five or six grains.

3. The oxide of mercury with sugar or honey, (*Hydrargyrum saccharatum*, *mel hydrargyri*,) where the mercury is triturated with twice its weight of sugar-candy, or with an equal part of honey, is, in many cases, an excellent remedy. The dose is eight or ten grains a-day, in the form of powder, pill, or troches. The *mel hydrargyri* is especially employed as a topical application to syphilitic ulcers.

4. The oxide of mercury with liquorice, in which the mercury is triturated with the inspissated juice of liquorice, (*glycyrrhiza glabra*,) reduced to a dark gray oxide, is one of the mildest preparations of mercury. From five to ten grains at a dose may be given, once or twice a-day, in the form of pill or bolus.

5. As regards the mercury triturated with lard, or the blue mercurial ointment, see chapter XXI. on mercurial frictions.

B. The red oxide of mercury, (*oxydum hydrargyri rubrum*,) prepared per se, or with the nitric acid, is an

acid remedy, and which, I have uniformly observed, occasions griping; hence it is now rarely employed internally. However, this inconvenience may be obviated to a certain degree by giving it every night in doses of half a grain, with a grain of opium, in the form of pill. Externally, it is applied with great advantage as an escharotic, sprinkled on syphilitic ulcers.

C. The white oxide of mercury used in practice, is never a pure oxide, but a triple salt of mercury. It is generally employed externally in the form of lotion; or united with six or eight parts of lard, as an ointment. (See *nitras hydrargyri ammoniacalis*.)

D. The yellow oxide of mercury, (*oxydum hydrargyri luteum*,) is always blended with a portion of sulphuric acid. It is advantageously employed in some diseases of the skin, given in doses of a quarter of a grain, twice or thrice a-day. It is sometimes administered as an emetic, or as a sternutatory, in doses of one to three grains. It might probably be employed with advantage, as a topical application to some syphilitic ulcers. (See *sulphate of mercury*.)

3. On Mercurial Salts.

1st. The ACETITE OF MERCURY, (*acetis hydrargyri*,) or the oxide of mercury united with the acetous acid. This preparation, known under the name of Keyser's pills, troches, or lozenges, has been greatly extolled in France of late. It has been puffed off as the best and safest preparation of mercury for the cure of syphilitic complaints of the most inveterate and obstinate kind,

without occasioning salivation, or any of those bad consequences which sometimes follow the use of other preparations of mercury. Time and experience have, however, demonstrated, that this remedy sometimes fails of curing syphilis; and it frequently produces the bad consequences charged to the other preparations of mercury. Indeed, every saline preparation of mercury must be acrid, and will produce more or less reaction in the living system; it will salivate, if not administered with caution, or if the patients do not observe the directions which are prescribed. Besides, in the number of patients to whom this remedy is administered, there must be many to whom it will not prove so efficacious as they have pretended. Every practitioner engaged in the cure of syphilis, must have seen cases, where one mercurial preparation has failed, and another has succeeded beyond expectation. We are not able to account for these differences, and we are not sufficiently acquainted with the animal economy to foresee them *a priori*. Keyser's pills are a saline preparation of mercury, in which the mercury, after being reduced to a gray oxide by long trituration, is then dissolved in vinegar. Hence they will sometimes produce admirable effects, and cure syphilis as perfectly as any other preparations of mercury; while on other occasions they will prove less beneficial, and even injurious. This observation, together with the difficulty of preparing this salt in the manner prescribed by Keyser, are the causes why this remedy is now laid aside. However, the latter objection may be obviated by preparing it as directed in the preceding chapter.

2d. The tartrate of mercury, (*Tartris hydrargyri*,) or the oxide of mercury combined with the tartarous acid, also the oxide of mercury united with the acidulous

tartrite of potass, known by the name of *terra foliata mercurialis*, are preparations which act with great violence on the system, without possessing any advantage over the other mercurial salts.

3d. The nitrate of mercury, (*Nitras hydrargyri*,) or mercury united with the nitric acid, is employed under different forms, both internally and externally. Internally it is commonly given from half a grain to a grain, in two pounds of the decoction of sarsaparilla, or guaiacum. The liquid nitrate of mercury, or the solution of mercury in the nitric acid, has been successfully employed as an external application to phagedenic ulcers. The same solution, diluted with water, is also used as a lotion, and proves an excellent remedy for syphilitic ulcers.

The *citrine ointment*, (*Unguentum syphiliticum citrinum*, s. *Unguentum ex nitrate hydrargyri*, Ph: syph.) is one of the most efficacious remedies for syphilitic affections of the skin. In some cases its strength should be reduced by the addition of two parts of lard. See Ph: Syph.

Of the red oxide of mercury, prepared by means of the nitric acid, I have already spoken, under the article of mercurial oxides.

The gray ammoniacal nitrate of mercury, (*Nitras hydrargyri ammoniacalis*, s. *pulvis mercurii cinereus*,) is a triple mercurial salt, less acrid than the other salts of this metal: it should not be given in larger doses than a grain; for otherwise it is liable to occasion griping and diarrhœa, as I have experienced in my own person.

Bellet's mercurial syrup, commonly, though improperly, called the vegetable syrup, a celebrated composition, the ingredients of which are kept secret, is a bad

remedy, and not to be relied on; for it is very differently prepared in the different shops, and very often the mercury which is added is precipitated by the addition of the alcohol or æther. See chapter 26, where I have treated of this remedy more fully.

Dr. Ward's white drops, highly celebrated in England, are an active remedy, and prove, in some cases, a valuable medicine. One ounce of the dry salt is to be dissolved in three ounces of distilled water, in a sand bath. From one to three drops a-day, are given in barley water, or in the decoction of sarsaparilla.

4th. The yellow sulphate of mercury, with excess of the oxide, (*Sulphas hydrargyri luteus cum excessu oxydi*,) also commonly termed *turpeth mineral*, *turpethum minerale*, s. *mercurius emeticus flavus*, is a very acrid remedy, and is now very little used. I have seen some instances, where this medicine, given daily in very small doses, effectually removed most obstinate syphilitic complaints of the skin. In the preceding chapter, I mentioned a particular manner of preparing this mercurial salt. Sixteen grains are to be dissolved in two pounds of distilled water; of which the patient is to take a table spoonful in a tumbler of water, once a-day, for thirty or forty days.

5th. THE MURIATE OF MERCURY, (*Murias hydrargyri*,) commonly called *calomel*, *aquila alba*, *mercurius dulcis*, is a combination of mercury with muriatic acid. It is an acrid preparation, which exerts a powerful action on the system, and especially on the intestines, producing griping and frequent evacuations by stool. It is, however, very remarkable, that children in general are but little affected by this preparation. I never employ the sublimed muriate of mercury, but that prepar-

ed by precipitation, as described in the preceding chapter. It is an excellent remedy for syphilitic ulcers. I direct this powder, mixed with saliva, to be rubbed on the syphilitic ulcers of the genital organs of either sex once or twice a-day, till they are cured; or I employ it mixed with honey or lard.

Mr. Clare, a surgeon in London, has published a few years ago, a new mode of employing this salt in the cure of syphilis. It consists in rubbing three or four grains of the muriate of mercury on the inside of the mouth, on the cheeks, lips and gums, night and morning; taking care previously to wash the mouth with warm water. He states that this remedy, thus applied, cures in a short time, and without much inconvenience, all kinds of venereal complaints; and though this application sometimes acts on the salivary glands, he is of opinion that, in general, it is more expeditious than any other method, in curing syphilis. He always continues these frictions for some time after the symptoms of the disease have disappeared. I have sometimes employed this method with great advantage, especially in syphilitic ulcers of the throat, but it is attended with some inconvenience. The mercury thus administered, increases the secretion of saliva, which I direct the patient to swallow, and it then is liable to cause griping and diarrhœa; if he spits, the greater part of the mercury is lost, which retards the cure, or renders it extremely uncertain. But these inconveniences are amply counterbalanced by the advantage of its speedy action on the ulcers of the throat, which, by their ravages, render such immediate relief necessary. Besides, this objection does not occur when the muriate of mercury is applied in the manner formerly proposed; that is, by rubbing it

on the ulcers of the prepuce and glans, or on the labia externa, and orifice of the vagina, or finally round the anus. I will not recommend this method alone as likely to effect a radical cure of syphilis.

The muriate of mercury is likewise employed with success in injections, or in lotions, suspended by means of mucilage in simple water, or mixed with lime water, to which it imparts a black colour: this is the *lotio syphilitica nigra*, s. *lotio ex muriate hydrargyri*, Ph: syph. It is well adapted to the purpose of cleanliness, especially in some of the chronic excoriations of the glans in old people, which are very troublesome, and often resist other remedies.

I must likewise take notice of a medicine, which many physicians have employed for some time, and still continue to employ, for the cure of the pox; I mean Plummer's *pills* and *powder*, which are not, strictly speaking, a preparation of mercury, but a mechanical mixture of the muriate of mercury and the yellow hydrosulphureted oxide of antimony, (golden sulphur of antimony.) I have already observed, that the muriate of mercury, when prepared by sublimation, is a very different medicine in different countries and places; that it is, therefore, a medicine not to be depended upon: moreover, it is in this instance mixed with the sulphur of antimony. For this reason, I never would advise any practitioner to trust to Plummer's pills for curing syphilis. Plummer thought of this composition, probably for the purpose which still seems to be expected by those who make use of it; viz. by means of the sulphur to prevent salivation, and to direct the mercury to the skin. This seems especially to be the design, in cutaneous eruptions of the syphilitic kind. But though

this medicine may sometimes be effectual in removing cutaneous disorders, I must, from my own experience, as well as that of several other unprejudiced practitioners, pronounce it to be a very improper one for curing confirmed syphilis. Repeated instances, indeed, have come under my observation, where these pills, having been taken for a considerable time, have removed the symptoms for a time, without effecting a radical cure; which is to me a sufficient reason for thinking it an unsafe medicine, and consequently that no practitioner ought to put confidence in it for the cure of syphilis, when he has safer medicines for this purpose at command.

6th. THE OXYGENATED MURIATE OF MERCURY, (*Murias hydrargyri oxygenatus*,) or mercury combined with the oxygenated muriatic acid, commonly called corrosive sublimate, is the most acrid and the most active preparation of mercury with which we are acquainted. The celebrated Van Swieten first introduced into practice the use of this mercurial salt, dissolved in alcohol.

Some years ago, this medicine engaged the attention of all Europe. By some it was recommended as a very excellent and efficacious remedy for the most inveterate complaints, and worst stages of syphilis. It was particularly extolled for eruptions of the skin, and syphilitic affections of the bones; whilst others exclaimed against it, as being frequently productive of the worst effects in the system, without hardly ever radically curing the distemper. Both parties seem to have gone too far in approbation as well as censure. I have seen cases where this medicine perfectly cured the most inveterate and obstinate complaints; while in others, I found it pro-

duced effects of the worst consequence; such as cardialgia, griping, purging, headache, fever, anxiety, oppression of the breast, and even spitting of blood, without curing or even appearing to have the least effect on the disease. But, in general, I have observed that this medicine very soon mitigates the most troublesome symptoms of syphilis, without effecting a radical cure, even after having been given for a very considerable time; and I am apt to think now, that the great reputation of corrosive sublimate arose at first from this property of frequently alleviating, so speedily and remarkably, the most troublesome symptoms.

Upon the whole, though it is certain that there are some constitutions which will never bear this violent medicine without danger, yet, from such observations as I have been able to make, it seems probable, that the bad effects attributed to the corrosive sublimate have sometimes arisen either from its improper preparation, from an immoderate dose, from a delicate and irritable constitution of the patient, or otherwise from a defect of practical judgment in the physician. Therefore, although I never like to employ violent medicines where I am able to effect a cure with mild ones, yet it must be allowed, that, in practice, cases will sometimes occur, attended with such symptoms as require the use of the most powerful medicines, if for no other purpose but for a speedy temporary relief. In these cases it will, sometimes, be highly advisable to have recourse to the sublimate; though it is probable to me, that such cases are much less frequent than it is commonly thought. But at any rate, the constitution of the patient ought to be well considered, before we have recourse to this medicine. If he is of a strong habit of body, and his

lungs healthy, we may safely try the sublimate, using the necessary precautions with regard to its dose and the manner of exhibition; but I never would recommend it where the patient is of a weak, delicate, and irritable habit of body, or if he has a narrow chest, has had formerly an hæmoptysis, or any pulmonary complaint; for these persons I have always observed to suffer from the use of this remedy. Moreover, I have seen many die of hæmoptysis, consumption, &c. after having gone through a course of corrosive sublimate. Some, indeed, who were apparently of a strong constitution, I have seen equally affected by this remedy; for which reason I think it always necessary to be cautious in the use of it. We ought never to begin with more than a quarter, or at most half a grain, a-day, dissolved in milk, in barley water, or a decoction of sarsaparilla. When given in this manner, especially in warm weather, there is less reason to apprehend its proving injurious, or at least dangerous. In using the sublimate it ought besides to be always remembered, that we can never be too careful with regard to its choice; and that with the utmost care and attention to the preparation of the sublimate according to the usual method, it is hardly ever possible to obtain it always of the same degree of strength, even by following the very same process. This method ought, therefore, to be abandoned in all our chemical laboratories, and the process I have described in the preceding chapter substituted in its stead. In all cases, therefore, the patient should be ordered to leave it off immediately, whenever he felt any of the abovementioned bad symptoms. In general, I must declare, that I consider the corrosive sublimate, in the hands of the young and common run of practitioners, as a real poi-

son, by which many patients are cut off in the bloom of life, or doomed to drag on a miserable existence.

The oxygenated muriate of mercury may be administered, dissolved in water or alcohol, or formed into pills; but the pills should not be made with crumbs of bread, as has been improperly directed, for they soon become so hard that they cannot be dissolved in the stomach, and are often found among the excrements in the state they were swallowed by the patient. It is better to make them up with starch, in the manner proposed for preparing the *Pilulæ hydrargyri gummosæ*. See Ph: syph.

As regards the frictions of the oxygenated muriate of mercury, recommended by Dr. Cyrilla, of Naples, I must remark, that of ten or twelve patients who in Naples had these frictions applied to the soles of the feet, eight died in the course of the year.

On the baths made with the same salt, see chap. 21.

The oxygenated muriate of mercury, dissolved in water, is likewise used with success as a lotion for syphilitic complaints of the skin, and as an injection in blennorrhagias, and particularly in blennorrhæas. See Ph: syph.

In some syphilitic ulcers, this salt is still more advantageously employed, when mixed with lime water; this mixture, long known under the name of *lotio phagedenica*, is inserted in the Pharmacopœia Syphilitica under the title of *Lotio syphilitica lutea*, s. *Lotio è muriate hydrargyri oxygenato*.

The oxygenated muriate of mercury, mixed with the extract of the *conium maculatum*, or according to circumstances, with the extract of the *aconitum napellus*, or *aconitum cammarum*, is often an excellent remedy

in the syphilitic pains resembling rheumatism, and in the painful swellings of the bones.

I shall add one observation; it is, that the saline and acrid preparations of mercury, especially the corrosive sublimate, produce, and often leave after their use, such an irritability of stomach, that the patients are forever incapable of taking any preparation of mercury without experiencing violent rheumatic pains, nervous fever, nausea, colics and diarrhœas. In such cases, if ever a course of mercury becomes necessary, this medicine can only be employed in the form of frictions.

CHAPTER XXI.

On the different modes of applying Mercury externally, so as to introduce it into the system.

1. *On Mercurial Frictions.*

OF the different modes hitherto discovered for the cure of syphilis, mercurial frictions are the most efficacious and certain; moreover, this mode is, in many cases, the only means by which a radical cure of the disease can be effected. Nevertheless, it is not free from inconvenience, and in order that this mode of applying the mercury may produce the desired effect, in the most

expeditious manner, not only will great skill and attention be required on the part of the physician, but likewise strict adherence, on the part of the patient, to the diet and regimen recommended; and the same observation applies to the use of any preparation of mercury.

Such is the difference of constitution, that some persons are more easily affected by a few frictions, than others, apparently under similar circumstances, are by twenty or thirty: if the frictions are continued in the former, with the view of increasing the good effect, there will be danger of giving rise to a train of formidable symptoms, as salivation, vertigo, fever, tremors of the extremities, and violent pains in the joints.

When the mercurial frictions operate kindly, this method of treatment occasions no unpleasant symptoms: the patient is cured without suffering during the course, or being weakened when it is finished. Many persons are relieved to a certain degree of every symptom of syphilis, by four or five frictions; while others require fourteen or fifteen to produce the same effect.

The frictions may be made, 1st. With mercurial ointment, prepared with animal fat, or the butter of cocoa: this is the usual and only way generally known. 2d. With mercury reduced to an oxide, by trituration with gum or mucilage. 3d. With the muriate of mercury, in powder, rubbed with saliva, or made into an ointment with lard.

To prevent, as much as possible, the pustules and other inconveniences proceeding from mercurial frictions, it is particularly necessary to have the ointment well prepared. The part on which the frictions are to be applied should be shaved, and care should be taken not to rub the parts roughly in the beginning; for the

pustules sometimes appear to proceed from the hairs being drawn in opposite directions, which may be easily avoided by the means already pointed out. When we have decided on the mercurial frictions, we must likewise keep in view, 1st. The selection of the spot whence the the greatest number of absorbents arise: the inside of the thighs, legs, and arms, are consequently to be preferred. 2d. To prepare the part where the frictions are to be made, so as to facilitate the absorption of mercury. 3d. To dispose the surface of the body to transmit the metal readily through its pores, after the desired effects have been produced in the system, and to prevent salivation and diarrhœa, and to prevent its lodging in the bones, or in any cavity of the body, of which many instances have been recorded. For this purpose, it will be always advisable to prescribe, before we begin the frictions, a purgative; and to order the patient to sit in a warm bath of about 96 or 98 degrees of Fahrenheit's thermometer, or 28 or 29 of Reaumur's, for the space of half an hour or an hour. After he has been in it for a quarter of an hour, he must be rubbed all over with a flesh brush or a piece of flannel and soap, to clean the skin, and adapt it the better to the purposes abovementioned. This is to be done, if no particular circumstance forbids, the day before, or the very day when we begin the frictions, and to be repeated once or twice a week afterwards, during the whole course of the frictions.

The same evening, or the day after, having made use of the warm bath, the patient should begin the friction, rubbing into the outside or inside of his thigh or leg, before he goes to bed, one scruple or sixteen grains of the mercurial ointment, prepared according to the

directions given in the preceding chapter. The friction is to be performed by the fire-side in winter; and the rubbing ought to be made gently, and continued for half an hour or an hour. The part is then to be covered with a piece of linen, or paper, fastened with a bandage; or the patient is to put on a pair of drawers, or a pair of stockings, if the friction has been made on the leg. The same bandage, &c. may serve for the whole time, or at least for several days, being only applied to keep the shirts and bed-linen from being soiled, and growing black from the ointment. The process for cleaning linen soiled by the mercurial ointment, recommended by citizen Vauquelin, we have given in the preceding chapter, under the article *Mercurial Ointment*.

Before each new operation, the grease and blackness ought to be well cleansed or washed off, with soap and warm water. The friction itself is best made by the patient with his own hand; but to fat people, or to the female sex, this operation may prove fatiguing; in which case a servant should be instructed how to do it, putting on a glove made of soft hog's bladder. I would not advise any person to perform this operation for another without putting on such a glove, because I have seen instances of a salivation being brought on in the assistant, from rubbing in the mercurial ointment with his naked hand. Besides, we cannot be certain how much ointment is rubbed into the patient, when part of it is absorbed into the servant's hand.

After the first friction, we are to observe attentively whether the mercury occasions any derangement of the system; if it does so, it ought to be omitted for a few days, and the patient to observe the same regimen, to

be well clothed, and to keep within doors, especially in a cold season, or bad weather.

If after two days, the patient should perceive no disagreeable symptoms, the second friction is to be made in the same manner as the first. The next day he must leave it off again; and if he then finds no ill effects, the friction ought to be continued hereafter every day, either morning or evening, without intermission, unless some accident intervene. The place of rubbing, however, must be changed every day, or every other day, in order to avoid irritating the skin, and pustules rising upon it. If after five or six frictions, we find that the patient has no fever, diarrhœa, salivation, or immoderate sweating, and that he will thus bear the mercury, we may rub in two drachms of the ointment at every friction, especially if the symptoms are obstinate. In these instances it will be better to divide the ointment into two portions, and rub them on both legs; or else to make the frictions on one leg in the morning, and on the other in the evening. Previous to each friction, it will be proper to remove, by means of a knife, the grease which remains on the skin, in order that the fresh portion of ointment may be readily absorbed, and that the skin may not be irritated by the acrimony which the grease contracts, and which is the frequent cause of painful pustules.

In this situation, if the weather be warm, or indeed unless it be severely cold and damp, the patient may go out every day during the frictions, provided he be warmly clothed, and avoid the cold wind, and especially the night air. But he ought carefully to guard against checking perspiration; and therefore, if the weather be cold, windy, or moist, he should rather keep at

home in a moderate warm room, and shun as much as possible every inconvenience from cold. In a severe season he should constantly wear woollen stockings, and a flannel waistcoat, according to circumstances, either over or under the shirt.

During all this time, however, he should, if possible, use the warm bath, as already directed, once or twice a-week; proceeding in this manner until his health is perfectly re-established; which will be after thirty or thirty-five frictions, if the soft parts only have been affected; but if the disease has been confirmed, or of a long standing, so that the bones are affected, fifty, sixty, or seventy frictions will be absolutely necessary to procure a perfect and radical cure; though this, no doubt, will vary according to the constitution of the patient.

It must here be remarked, as an observation of great consequence both to the physician and patient, that the cessation of the symptoms is never to be looked upon as a sign of a radical cure. This we ought to tell our patient in the beginning, especially to those of the female sex, that to alleviate the pain or abate the symptoms of the disorder, and to destroy and eradicate the syphilitic virus from the body, are two things widely different. The former may be often accomplished in three or four days by a very few frictions; whereas the latter will require as many months. The same thing will undoubtedly happen in this respect, when we leave off the frictions as soon as the symptoms disappear, as when we leave off the cinchona in intermittents as soon as the fever is gone; the fever soon returns again, although perhaps with a different type; but by continuing the cinchona a little longer, we are sure of rendering the

cure perfect, and need not be in the least afraid of a relapse.

We must, therefore, for the safety of our patients, continue the use of mercury for two or three weeks, or at least ten days, after the syphilitic symptoms have entirely disappeared.

When the patient, during the frictions, or any other course of mercury, feels his gums begin to swell, his breath to smell disagreeably, his throat to become painful in the inside, or when he is obliged to spit oftener than usual, the use of mercury is immediately to be left off till these symptoms disappear, and then he may go on with it again. But in general I think it eligible to go on with the frictions, if the patient can otherwise bear them, pretty briskly, until the mouth be a little affected: because thus we are certain that the frictions have had their proper effect, and that the mercury has been absorbed into the system.

The generality of patients, as has been already mentioned, find some relief after a few frictions; but there are some, especially those who have the skin and the bones affected, or who have some inveterate ulcers in the throat, where there is no remission of the symptoms till after fifteen or twenty frictions. And sometimes in this state of the disease, sixteen or seventeen ounces of mercurial ointment will be requisite to produce a perfect cure.

2. *On Mercurial Baths.*

Some modern practitioners have recommended the administration of mercury in the form of bath, or in the form of glysters, for the cure of syphilis. Mercury may certainly be employed in this way, and in some cases perhaps with advantage; but no enlightened physician will rely on either method for the radical cure of this disease. The oxygenated muriate of mercury dissolved in warm water, has been principally used for this purpose; and as this salt is but little soluble in water, a quantity of the muriate of ammonia or of the muriate of soda is added, to give it greater solubility. Mercurial baths or glysters may, in some instances, prove an advantageous auxiliary to a mercurial course, and for this purpose the solution of mercury in nitric acid may be employed. But I must observe again, that the repeated use of the oxygenated muriate of mercury, and perhaps of the nitrate of mercury, destroys the beauty of the skin, which renders these baths objectionable, especially for women: besides, it never will be prudent to depend on this application alone, for the cure of syphilis.

3. *On Mercurial Glysters.*

If we wish to employ mercurial glysters, two or three grains of the oxygenated muriate of mercury, or of the nitrate of mercury, should be dissolved in ten or twelve ounces of distilled water, and injected once or twice a-day.

4. *On Mercurial Fumigations.*

Though mercurial fumigations are no longer employed by the physicians of Europe, for the cure of syphilis, they nevertheless furnish a very efficacious remedy in local complaints, particularly in some obstinate ulcers and condylomata. Nothing, in my opinion, proves more satisfactorily that the mercury acts directly or chemically on the virus, than the almost instantaneous effect produced by mercurial fumigations in syphilitic ulcers. For this purpose a certain quantity of the red sulphure of mercury (artificial cinnabar) is to be thrown on live coals, and the fumes are to be directed on the affected parts by means of an iron funnel, formed of one piece without any solder.

CHAPTER XXII.

On Ptyalism, or the Salivation occasioned by the use of Mercury.

ONE of the most constant effects of mercury on the human system, is an increase in the secretion from the salivary glands of the mouth and throat; whence arises the disagreeable symptom termed ptyalism, or salivation.

It has been a matter of controversy, whether a confirmed syphilis can be radically cured without salivation; and though there is now hardly any medical man who doubts of the possibility of a perfect cure without it, there are still many who employ salivation, not only for the cure of syphilis, but, in some countries, for that of blennorrhagia also. This mode of treatment, in the former case, is still very much in vogue, in private practice as well as in hospitals, especially in France. In England, and in Germany, it is almost entirely confined to hospitals, where unhappily the practice is too often a mere routine.

How far this practice of salivating syphilitic patients is justifiable, shall be the subject of my present inquiry.

It has been the opinion of Dr. Friend, and many ancient as well as several modern writers, that a salivation is not only necessary to effect a radical cure of syphilis, but even that the greater the salivation, the more certain and effectually will be the cure of this disease, especially when the bones are affected.

I must confess, I have always experienced the direct contrary of this assertion. Amongst a great many patients of different ages and constitutions, in different climates, who have been under my care, I have not found one who required salivation; but I have, on the contrary, constantly observed, that the greater the salivation, the less certain and effectual was the cure of syphilis. This is so true, that even the modern advocates for salivation unanimously confess, that a strong salivation is hurtful, and that only a gentle one should be raised. Could I allow this to be right, I would observe, that to stop, or even to moderate, a salivation once begun, is in many cases more easily said than ac-

complished. This is often entirely out of our power; and it is yet one of the great desiderata in medicine, to know a specific remedy that will produce such an effect. This is so little in our power, that I have seen more than once patients carried off by salivation, (their strength being totally exhausted,) before it could be lessened or stopt by any remedy whatsoever. Others who did not sink under it, remained languid, from the evacuation, for months and even years; and several I have seen die of a consumption brought on by such a course. Besides, a salivation is not only very troublesome to the patient, by spitting day and night, and by filling the room with a very disagreeable smell, but frequently also produces painful ulcers in the mouth, fauces, &c., which if not taken care of in time, or being mistaken for syphilitic ones, by continuing the use of mercury, become more dangerous than the syphilis itself.

It may seem surprising, therefore, how such a dangerous method of attempting the cure of syphilis as that by salivation, should still be retained and practised in some hospitals. The three following reasons, indeed, I have heard alleged: 1. To confine the patients with a gonorrhœa or lues to the room, and to prevent them from getting a fresh infection before they are cured of the first. 2. To get rid of such poor patients in a month or five weeks, in order to take others in their place into the hospital, who are treated and sent away in the same manner. 3. Because many of the lower class of people have an unhappy prejudice in favour of this method, and imagine that they cannot be radically cured without what they call a good and continued salivation. These reasons, however, appear to me wholly insufficient. To prevent the patients from getting a fresh

infection, better means might easily be adopted. With regard to the second point, I think it more reasonable, and more humane, to cure a smaller number of patients radically without salivation, even though a little longer time should be taken up for the cure, than to relieve the complaints of a greater number in a shorter time by such an uncertain, troublesome, and sometimes dangerous method. We may add to this, that experience daily shows that a number of these patients, who seem to be cured by the cessation of the symptoms during a salivation, very frequently return in a short time after to the hospital, with the same symptoms they were affected with before, or find themselves obliged to seek assistance somewhere else, at the same time that they solemnly protest against their having exposed themselves to a new infection. The third reason alleged in favour of salivation, is the worst of all. I am of opinion, that no person of integrity, who practices medicine, should ever comply with the prejudices of his patients, when they may be hurtful to them, or when he knows that by a contrary method he is able to cure them with greater certainty and safety. Besides, it will be an easy matter for a surgeon, or physician, who knows how to gain the confidence of his patient, to convince him of the folly of such prejudices. Salivation, therefore, being, in my opinion, an exceptionable method of cure in any circumstances whatever, I think it, in all cases, most prudent to avoid it; or if it should have taken place, to moderate and remove it as speedily as possible.

But though I am far from considering a profuse and continued salivation as a critical or salutary evacuation in the cure of syphilis, yet in every case I am pleased

to see the mouth slightly affected during a course of mercury; because it affords a sure indication that the mercury has penetrated the system, and that it has impregnated the saliva, or mucus of the mouth.

The method of preventing a salivation I have laid down above, when speaking on mercurial frictions. The means to be used for this purpose are shortly these. 1. A careful administration of mercury, both as to its preparation and dose. 2. The avoiding cold or damp air, especially at night. 3. The use of warm clothes; or, in a cold damp season or climate, the constant wearing of flannel next the skin. 4. The repeated use of warm baths, and the internal use of diaphoretic or diuretic decoctions along with the mercury. 5. The avoiding too hot rooms and confined air. 6. Covering the neck and head but very slightly, day or night. 7. Intermitting the use of the mercury, as soon as the breath and teeth begin to be affected. 8. Taking a gentle purgative, if circumstances do not forbid. 9. If the patient be not of a phlogistic habit of body, a free diet, with the moderate use of wine, is to be ordered, rather than a low one. Smoaking of tobacco should also be avoided, during a course of mercurials, by those who are accustomed to it. It is likewise to be observed, that, in general, a salivation will take place more readily under the use of acrid mercurial preparations, and in a cold and damp season or climate; that some constitutions are more disposed to it than others; and that particularly those who have previously taken mercury, are often ready to fall into a salivation by using the smallest dose; though perhaps in the former disease they experienced no such effect from the use of it.

In Europe we know of no remedy but mercury

which, taken internally, is capable of exciting salivation. But Marsden (in his description of Sumatra) informs us, that the decoction of the root of the *Smilax China*, which the natives employ for the cure of syphilis, often produces salivation; an effect which I have never observed from the same remedy, when given in Europe.

A variety of medicines, given separately, or combined with mercury, have been recommended for preventing it from affecting the mouth, as well as for checking a salivation after it has taken place. The principal of these are sulphur, the yellow hydrosulphureted oxide of antimony, camphor, cinchona, and iron. By a careful attention, however, to the foregoing rules, I think it is, in general, not very difficult to avoid a salivation, without having recourse to any of these remedies; especially as I have seen some of them repeatedly applied, without success. With regard to the latter point, viz. the abating and removing a salivation when once begun, I found it almost always a very difficult matter; the following method, however, with an exact observance of the rules above-mentioned, will frequent be attended with success.

As soon as the patient feels his mouth affected, he ought to leave off the use of mercury, and keep within doors, in a moderately warm room, if the season be cold. If his strength and constitution will allow, we may administer a gentle laxative; but we ought to be careful about prescribing purgatives, because they will often bring on a diarrhœa, which we shall sometimes find great difficulty to stop, and which may prove dangerous in its consequences. What is generally better suited, is to administer a glyster, and to prescribe barley water,

saloop, or any other mucilaginous decoction; and to give him once or twice a day, one or two scruples of sulphur, or else the hydrosulphureted oxide of antimony, to which camphor or opium may be added with advantage. If the ulcers of the mouth, produced by the mercury during salivation, are very painful, they may be touched four or five times a-day with a little honey and borax; and the patient should gargle frequently with a mucilaginous decoction, to which honey and borax have been added. If his strength will bear it, he should likewise, for four or five days, be placed every evening in a warm bath, rubbing his body during that time with a flesh brush, or a piece of flannel: and when he comes out of the bath, he is to dress himself again immediately in flannel. If phlogistic symptoms occur, bleeding may be necessary; and the patient is to be confined to a low diet, but if his strength be very much reduced, a good nourishing diet, together with the use of wine, and infusion of cinchona, either in water or in wine, and the free country air, are certainly more proper. When the irritation of the salivary glands is very great, and the spitting continues undiminished, an astringent gargle may be advantageously prescribed. It may be made of the decoction of cinchona, of the root of the tormentilla erecta, or of the bark of the white willow, in red wine, or in water. If the salivation is very violent, and the patient swallows the saliva, it is often expedient, with the view of preventing unpleasant symptoms, especially the dysentery, to administer an emetic to counteract the excessive action of the mercury, and to prescribe the decoction of cinchona, the sulphuret of potass, sulphur, or the hydrosulphureted oxide of antimony.

In obstinate salivations, the internal exhibition of the tincture of cantharides, or the application of a blister, of a seton, or of the caustic to the back of the neck, or the ammoniacal liniment applied to the throat, sometimes produce happy effects; and in desperate cases we may try cold water thrown upon the head and face, the patient's body being at the same time immersed in a warm bath. Sea bathing has proved very serviceable in some obstinate cases.

I have learnt that two scruples of the root of the *dorstenia contrayerva*, in powder, has been successful given twice a-day, in obstinate ptyalism. Linnæus (in his *Flora Suecica*) mentions a case of ptyalism, excited by the use of mercury, which continued more than a year, and was in a short time perfectly cured by the use of the simple infusion of the leaves of the *mar-rubium vulgare* in water. In all cases of obstinate ptyalism, we must carefully examine whether this evacuation may not depend on a caries of the jaws.

If after having checked the salivation, the patient remains in a state of exhaustion, the best remedies are nourishing diet, and tonic medicines, as cinchona, iron, and especially the Spa and Pyrmont waters. If circumstances permit, I consider sea bathing as the best tonic for constitutions weakened and relaxed by a mercurial course. The internal use of opium is particularly adapted to cases of great irritation.

Great attention should be paid to cleaning the mouth, and especially the ulcers proceeding from an acrid state of the saliva, the neglect of which I have often known followed by dreadful, and sometimes irreparable injury. These ulcers soon corrode the soft parts, and even the neighbouring bones. The best remedy against this distressing complaint is, according to the observa-

tion of Professor Sprengel, of Halle, the decoction of galls, frequently employed as a wash or gargle. I have used with success, a solution of borax, or a solution of three or four grains of the sulphate of copper, or of alum, in an ounce of water, occasionally, with the addition of honey and the tincture of myrrh, applied by means of a hair pencil, five or six times a-day, to the ulcers. For the same purpose, some have recommended one part of the nitrate of silver, dissolved in one thousand parts of water.

The salivation has sometimes been continued by the mere exfoliation of the alveolar process; in such cases it will be easily understood, that all remedies must prove unavailing, and that we must wait till the exfoliation is completed; the ptyalism will then abate, and at length cease spontaneously.

It is a remarkable fact, that mercury sometimes produces salivation several months after the cure of syphilis has been completed, though it did not affect the mouth at the time it was administered. Cold and moisture appear to be the principal causes of this phenomenon.

Another fact equally worthy of remark, is, that the properties of the saliva, and likewise of the gastric juice, are so altered, in some cases, by the use of mercury, that these fluids no longer contribute to digestion, according to the original and natural order in the system; for some patients who have undergone one, and especially several courses of mercury, are subject to frequent indigestions, to flatulence, and to colics, which they did not experience before they had taken mercury. The use of cinchona, and of the sulphur and chalybeate springs, are the most efficacious means which the art at present offers for the cure of these complaints.

CHAPTER XXIII.

On the modus operandi of Mercury, and its various preparations; and likewise of the Oxygenated Remedies which have been lately tried as substitutes for Mercury.

THE rapid, certain, and sometimes astonishing effects of mercury, on the diseases produced by the syphilitic virus, have always attracted the attention of practitioners, ever since the discovery of this valuable medicine.

Various hypotheses have been proposed, in order to explain how mercury produces these beneficial and wonderful effects. Some authors have imagined that it acted simply by gravity; others, that it exerted this power by its stimulating quality, by virtue of which it increased the various secretions and excretions of the body. Lately they have advanced, that mercury cures syphilis, by producing a certain change in the blood, whence is induced a state of general debility, and a species of cachexy, or a certain corruption or putrefaction of the fluids, resembling, in many respects, scurvy; and that the salivation constituted a sort of crisis, by which the syphilitic virus was expelled. Lastly, Dr. Darwin has maintained that mercury, exhibited in any manner whatever, for syphilitic complaints, acted simply by increasing the absorption of the matter of syphilitic ulcers.

We shall not examine the first hypothesis; it does not merit a refutation. The second will have but few

advocates, when it is considered, that metallic mercury exerts no action on the syphilitic virus; and that two or three grains of the oxide, or mercurial salt, taken into the system, will sometimes remove the most violent symptoms of syphilis; that mercury often radically cures the disorder, without sensibly increasing any of the secretions or excretions, while at other times, though exciting very copious excretions, it leaves the virus unsubdued, and the patient not cured. In respect to the third hypothesis, I must observe, that this supposed cachexy, or putrefaction, is by no means required for the cure of syphilis in any of its forms. We often cure syphilis radically, without producing such a change in the solids or fluids; and we know that a continued salivation, which was formerly insisted upon, is by no means essential, nor even beneficial towards a radical cure of syphilis; that the most complete salivation is far from always curing the pox; that on the contrary, it often leaves it unsubdued; and that if we are now in the habit of pushing the mercury till it begins to affect the salivary glands, it is not with the view of producing this cachexy or crisis by salivation, but merely to satisfy us that it has passed into the system, and that it has affected the constitution.

The fourth hypothesis, which ascribes to the mercury the power of exciting the action of the absorbent system, and consequently increases the absorption of the virus of syphilitic ulcers, I will not absolutely deny. This theory affords a satisfactory explanation of the drying and healing of syphilitic ulcers; but does not explain the manner in which mercury produces this absorption of the syphilitic virus, and destroys its power of acting on the animal economy. It appears

then to me, that in order to produce this last effect, something more is required than an increased absorption of the syphilitic virus. Besides, the mere cicatrization of syphilitic ulcers of the genitals, or throat, &c. is by no means an indication of the radical cure of syphilis; these are two very different things. We too often see the effects of the syphilitic virus, soon after such a cure, returning with more violence and more obstinacy in the same spot, or in some other part of the body.

According to this theory, it has been maintained, that the oxides of mercury exert no particular action; that the other metallic oxides possess the same property; and that shankers may be cured by any one of these metallic oxides. But though this may appear probable at first sight, on a more attentive examination the fallacy of the proposition will be easily detected. If we examine with attention the effects of the different metallic oxides on the human system, what a great difference between the effects of the oxides of lead, zinc, antimony, arsenic, and those of mercury! And what is highly important to remark, none of these oxides, when administered internally, except the last, are capable of curing the disease. Respecting their effects when applied to shankers, let us first inquire into the general acceptation of the term shanker.

On consulting different authors, we find great confusion prevailing respecting the term: and some practitioners, considering all ulcers which appear on the organs of generation as syphilitic, apply to all of them the name of shanker, and consequently employ in all the same antisymphilitic treatment. In the eleventh chapter, I demonstrated the fallacy and danger of this hypothesis, and I described the nature of the different ulcers

affecting the genital organs; and though I do not deny that some ulcers are cured by the different metallic oxides, I am convinced, by repeated and attentive observation, that ulcers truly syphilitic, and not complicated, rarely yield to any other than the oxides of mercury; I might adduce numerous experiments, in which I have tried in vain the other oxides for the cure of syphilitic ulcers of the genital organs, which were cured in a few days by the oxide of mercury.

From these considerations, I conclude, that all these hypotheses, which have been advanced to explain the action and effects of mercury on the syphilitic virus, and the complaints occasioned by this virus, are unfounded, and by no means satisfactory. These reasons induced me to state, in the first edition of this work (1784), that if any opinion could be offered on this obscure subject, chemistry would probably furnish a more rational and more satisfactory theory than any hitherto advanced. With these impressions, I stated, that it appeared to me more probable that mercury, in the state of an oxide or salt, acted on the syphilitic virus by a species of attraction or chemical affinity; by virtue of which, whenever it met the virus, it united immediately with, and neutralized the virus, forming a compound possessing none of the properties of either; and the nature of the virus being thus changed or destroyed, its noxious effects on the human system must necessarily cease, and the patient find relief the moment that this combination takes place; and moreover, that if the virus has been completely destroyed by a sufficient quantity of this remedy, the patient must be radically cured.

According to this theory, we can understand and explain much better, in what manner a few grains of mer-

cury sometimes allays the most excruciating pains in the bones; but likewise why mercury, administered internally, cures ulcers and other syphilitic symptoms in any part of the body; and vice versa, why the oxides and mercurial salts, if timely applied on primary or original syphilitic ulcers of the genital organs, effect a radical cure, and often in a few days, without there being any necessity of exhibiting the mercury internally. This hypothesis appears to receive further confirmation, when we reflect, that in order to produce the desired effect on the virus affecting the system, the mercury must always be absorbed and carried into the circulation; but that it cannot cure syphilis, though absorbed into the mass, if it is not transmitted in sufficient quantity to the affected spot, and if it does not there immediately unite with the virus. In this way we readily explain, why the mercury often cures syphilis, without sensibly increasing the secretions or excretions of the body; and why, when it excites diarrhœa or profuse sweats, or copious salivation, far from destroying the virus, often leaves it untouched; and finally, why the syphilitic complaint, which had disappeared during the use of mercury, often returns even in the same spot, and sometimes with increased violence, some weeks or months after the patient has been dismissed as cured from the hospital, and though he had taken large quantities of mercury.

Though I consider this theory as more satisfactory than any hitherto advanced, it has ever appeared to me as imperfect; indeed, I have only offered it as a simple conjecture. Nevertheless it seems to derive direct support from a curious and ingenious experiment performed by Dr. Harrison, which deserves to be recorded. He

took the matter of an ulcer decidedly syphilitic, and after having triturated it with the oxide of mercury, he inoculated with this matter. No infection followed; while the inoculation performed with matter taken from the same ulcer, without being mixed, produced an ulcer and other syphilitic symptoms. This insulated fact deserves to be confirmed by direct and repeated experiments;* for if fully established, it would prove indisputably that there exists a reciprocal action and chemical union between the syphilitic virus and the mercury.

I must add, that it has been observed since, that mercury, in the metallic state, appears to possess no action on the human system and over syphilis; that it acts on the virus only when it is oxidated, or, as it was formerly termed, calcined; and that its action on the human system appears to be in proportion to the degree of oxidation it has undergone in the preparation which is administered. The red and yellow oxide of mercury, the nitrate, and especially the oxygenated muriate of mercury, afford a striking illustration. But we learn from the discovery of the French chemists, that mercury, when oxidated, is not a simple substance, but a compound of oxygen and the metal. It remains, therefore, to be ascertained, whether the effects of the mercurial oxides on the human body in general, and on the

* The result of this experiment, in addition to the facts related above, in the same chapter, seem to be directly opposed to the theory lately offered to Dr. Darwin, on the action of oxygen on syphilitic ulcers, in a work otherwise excellent, and replete with novel and profound views, tending to advance the science of medicine. See *Zoonomia, or the Laws of Organic Life*; by Erasmus Darwin, M. D. 2 vols. 4to. London, 1796

syphilitic virus in particular, are owing to the mercury, or the oxygen contained in those preparations; or whether it is not to the union of these two principles, that we must ascribe the effect of these medicines. The last proposition has appeared to me the most plausible; and I will presently state my reasons for giving it the preference.

To modern chemistry, which has already thrown so much light on the animal economy, on the nature and cure of many diseases, and on the action of different medicines, we must look for an elucidation of this question: to practical physicians, instructed in all the principles of this sublime and useful science, we must look for the resolving of this interesting problem.

Until direct and repeated experiments and observations shall resolve this problem, I will relate those facts which tend to elucidate this important question. I shall begin with the observations of others, and I shall conclude with those I have made since the last edition of this work.

Professor Fourcroy first remarked, in his lectures, about twelve years ago, that the medicinal property of many of the chemical compounds depended on the combination of oxygen, and which appeared to be in proportion to the quantity of this principle.

The late Dr. Gutanner has since maintained, that the effects produced in the human body by the different preparations of mercury, were entirely owing to the oxygen with which they were combined; and that on the disengagement of this principle, and on its action on the syphilitic virus, the anti-venereal effects of mercury depended. But neither he, nor any other chemist or practitioner, has attempted to support this assertion by

direct and positive facts, and employing in the cure of syphilis, as a substitute for mercury, any article containing a large portion of oxygen.

Mr. W. Scott, surgeon, in Bombay, instructed in the principles of modern chemistry, and knowing the happy effects of mercury in the cure of chronic hepatitis, first supposed, in the year 1793, that the same effect might be produced by the internal exhibition of the nitric acid. This acid is known to be composed of oxygen and azote; but the azote having but a slight affinity to the oxygen in the composition, is easily disengaged. Being at the time affected with a disease of the liver, he determined to try the effects of the nitric acid on himself. He accordingly took about one drachm of nitric acid, diluted with two pounds of water, every day. In seven days he was perfectly cured. This happy experiment induced him to make trial of this acid in the cure of syphilis.

He discovered, that the oxygen administered in this way, proved no less efficacious than mercury in the cure of this disease in all its forms and degrees; its effects were in some instances superior, for this acid succeeded completely in many cases, in which mercury had been previously administered, both in Europe and in India, for a long time, without success. He observed likewise, that the acid produced none of the disagreeable effects which are occasioned by mercury, and that it may be continued for a length of time without danger. Many syphilitic patients were cured by this new remedy in the warm climate of India, in a very short time, commonly in fifteen or twenty days, without any bad effects being produced. Mr. Scott, however, in his letter dated Bombay, May 1796, candidly states, that

in some cases this remedy had not effected a cure, but they were persons in whom mercury had been previously administered without any advantage. Besides, he observes, that many syphilitic patients were cured by the acid alone, when no other remedy had been employed; and that for two years, no relapse had occurred, though the cases were extremely diversified.

These observations on the nitric acid in the cure of syphilis, made by Mr. Scott in Bombay, and published in Edinburgh in 1797, induced (in the month of March in the same year), Dr. Rollo, physician of the Hospital at Woolwich, near London, to think of repeating these experiments in primary or original syphilitic complaints, that is, produced by immediate infection. Mr. Cruickshank, a celebrated surgeon in the same hospital, undertook to perform the experiments. Their result, and the accuracy with which they have been recorded,* deserve the attention of every practitioner. Mr. Cruickshank, more fully to elucidate the point in question, and to ascertain whether it was really the oxygen which cured the syphilitic complaints when treated by mercury, proposed to make trial, 1. Of nitric acid. 2. Of citric acid. 3. Of oxygenated muriatic acid. 4. And of the superoxygenated muriate of potass.

To enable our readers to judge for themselves, we shall give an analysis of these experiments, and add, in the form of notes, such reflections as are necessary to comprehend the results.

* These facts are published in a very interesting work on Diabetes Mellitus, by Dr. Rollo, in 2 vols. 8vo. London, 1797.

Experiments with Nitric Acid.

1. The patient had a syphilitic ulcer or shanker on the glans penis, near the frænum, about three or four days: he took daily one drachm of nitric acid in twenty ounces of water; in a few days the dose was increased to a drachm and a half. He entered the hospital on the 12th of March, 1797, and was cured on the nineteenth of the same month.

2. The patient had several syphilitic ulcers on the glans and prepuce, accompanied by a phymosis, which appeared eight days ago. He took one drachm of the acid with two pounds of water daily. Three days after, no sensible effects being observed, the dose was increased to a drachm and a half. He was received on the 12th of March, and was cured on the twentieth of the same month.

3. The patient had for eight days, a large ulcer on the prepuce, with a slight discharge from the urethra. He took daily one drachm of nitric acid in two pounds of water. The dose was increased to one drachm and a half and afterwards to three drachms a-day; but this dose occasioning some uneasiness and fever, the dose was reduced to two drachms and a half. He was received on the 18th of March, and was cured on the 22d of April. The cure had been retarded by other circumstances.

4. The patient had a large ulcer on the prepuce. He took daily one drachm of acid in two pounds of water. This quantity occasioning colic, he took a grain of opium at bed-time for two days: the dose of the acid was then gradually increased to three drachms a-day,

without his experiencing any inconvenience. He was received on the 15th of March, and was cured on the 18th of April.

Experiments with the Oxygenated Muriatic Acid.

1. The patient had several syphilitic ulcers on the prepuce, which appeared eight or nine days before. He took five drops of the oxygenated muriatic acid, with one ounce of water, thrice a-day. The dose was gradually increased to fifteen drops, diluted with water, and given four times a-day. Received on the 12th of March; cured on the twentieth of the same month.

2. The patient had a deep syphilitic ulcer on the glans and prepuce, of eight days' standing. He took six drops of the acid, thrice a-day. No change being observed in the ulcer, the dose was gradually increased to fifteen, twenty, and even forty drops, four times a-day. Received the 12th of March; cured on the 1st of April.

3. The patient had several syphilitic ulcers on the glans and on the prepuce, and a bubo. He took eight drops of the acid, four times a-day; the dose was gradually increased to thirty drops four times a-day; but this dose occasioned general inflammatory symptoms, for which he was bled. Some days after, the ulcer appearing stationary, the dose of the acid was gradually increased from thirty to fifty drops four times a-day. Received on the 18th of March; cured on the 22d of April.

N. B. The bubo burst on the 22d of March, and was healed fifteen days before the ulcer.

4. The patient had several syphilitic ulcers on the

glans and prepuce, with a phymosis and swelling of the inguinal glands. He took eight drops of the acid, in an ounce of water, three times a-day. The dose was gradually increased to fifty drops four times a-day. The inflammatory symptoms occasioned by this dose were relieved by bleeding; four days after, he took forty-five drops four times a-day. Three days after, the dose was increased to a drachm four times a-day. Received on the 18th of March; cured on the 4th of May.

N. B. This was a very obstinate case; the patient had a painful enlargement of the lymphatics on the dorsum penis; but this enlargement, and likewise the swelling of the inguinal glands, gradually disappeared.

Experiments with Lemon Juice, or the Citric Acid.

1. The patient had a syphilitic ulcer on the glans penis. He took one ounce of lemon juice, with three ounces of water, three or four times a-day. Received on the 12th of March; cured on the twentieth of the same month.

2. The patient had several syphilitic ulcers on the prepuce and glans, for eight or ten days. He took one ounce of lemon juice, in two ounces of water, three times a-day; the dose was gradually increased to four, and afterwards to eight ounces a-day. Received on the 12th of March; cured on the 22d of April.

N. B. Five days after he was received, a bubo appeared, to which cold fomentations with the acetite of lead were applied; and afterwards the electric spark was drawn from the part daily for some days. This tumour disappeared three days after the ulcer had cicatrized.

3. The patient had a large ulcer on the glans, and the inguinal glands were considerably swelled. He took one ounce of lemon juice, four or five times a-day; and a fomentation with the acetite of lead was frequently applied to the tumefied gland. The ulcer was healed in eight days. The bubo being disposed to suppurate, was covered with an emollient poultice twice a-day for two days. In a few days there appeared round the abscess an erysipelatous inflammation, accompanied by pain and swelling. Dry lint was applied, and over it a cold poultice, composed of one drachm of the acetite of lead, twice a-day: the lemon juice was continued, the dose being increased to six ounces a-day. Received on the 18th of March; the syphilitic ulcer was healed on the 26th of March, and the ulcerated bubo was cured on the 24th of April.

Experiments with the Superoxygenated Muriate of Potass.

1. The patient had been affected with syphilitic ulcers on the glans and prepuce, with a considerable enlargement of the inguinal glands for ten days. He took three grains of the superoxygenated muriate of potass, four times a-day, for three days. No sensible effects being observed from the remedy, the dose was increased to four, and afterwards to five grains, four times a-day; at the same time electric sparks were taken from the enlarged inguinal gland.* The ulcers healed in thirteen days; but the bubo increasing, the electricity

* Mr. Birch, surgeon in London, first proposed the application of electricity to this disease of the inguinal glands; and he has employed medical electricity with great success.

was discontinued, and the cold fomentation with the acetite of lead was frequently applied, and the salt was given in doses of seven and afterwards of eight grains four times a-day. The bubo broke, and without discharging much pus, was perfectly cured in twelve days. Received on the 27th of April; ulcers healed on the 9th of May; the bubo completely healed on the 29th of the same month.

N. B. Eight days after the patient had begun to take the superoxygenated muriate of potass, his pulse rose to 90 pulsations in the minute, and his tongue became white in the middle. Some blood was taken from him, which had the inflammatory coat (a coagulation of the albuminous part of the blood); and though the salt was given in large doses, from five to eight grains four times a-day, he continued in good health. His appetite was at no period so keen as in those cases where the acids were employed, nor was the quantity of his urine augmented in any very sensible degree.

2. The patient had several syphilitic ulcers on the glans, and a phymosis. He took three grains of the salt four times a-day; and four days after, seven grains, four times a-day. Received on the 3d of May; cured on the 16th of the same month.

N. B. Ten days after he had taken the salt, he complained of thirst, and his tongue became white in the middle, but his appetite and urine were not increased. His pulse remained nearly all the time at the natural standard.

3. The patient had several syphilitic ulcers on the glans and prepuce, and the latter was much thickened. These had made their appearance about three weeks before he applied to the surgeon. He began with three

grains of the salt, four times a-day; nine days after, the dose was gradually increased from five to eight, and finally to nine grains four times a-day, without any particular symptom, except a slight increase of thirst, and a little whiteness on the tongue. Received on the 8th of May; cured on the 29th of the same month.

4. The patient had a syphilitic ulcer on the prepuce for eight days. He began with six grains of the salt, four times a-day; and the dose was gradually increased to eight grains, four times a-day. Received on the 25th of May; cured on the 2d of June.

N. B. Nearly the same symptoms as in the preceding case.

5. The patient had several ulcers on the prepuce, which made their appearance some days before, and increased very rapidly, not only in number but in size. He took four grains of the salt, which was gradually increased to eight, nine, twelve, and even to fourteen grains, four times a-day. Received on the 8th of May; cured on the 18th of June.

N. B. This patient was evidently of a scrofulous habit. Seven days after he entered the hospital, he complained of thirst, his tongue became rather white, and the syphilitic ulcers on the penis were surrounded with an erysipelatous inflammation. On this account he was directed to take a drachm of cinchona, with the salt, four times a-day, and pursued this course for sixteen days; at which period the ulcers became less painful, and began to heal, and the erysipelatous inflammation had almost entirely disappeared; but the inflammation having returned three days after, the patient was directed to take five drachms of cinchona, with forty-eight grains of the superoxygenated muriate of potass, per

diem. The scrofulous habit of the patient was supposed to have been the cause why the ulcers healed so slowly; but I am rather of opinion, that the cinchona, being mixed with the superoxygenated muriate of potass, had decomposed this salt, at least in some degree, and being itself likewise changed by this means, was the real cause of the delay experienced in this case. But I only offer this opinion, to render practitioners more attentive in the combination of these two articles. See the following chapter.

6. The patient had, for several weeks, a large syphilitic ulcer on the prepuce, and several of the inguinal glands were much enlarged. He began with six grains, and two days after, eight grains, four times a-day; cold poultices, with the acetite of lead, were frequently applied to the enlarged glands. In six days the ulcers appeared disposed to heal, but an abscess had formed in one of the glands; the patient continued to take ten, and then twelve grains of the salt, four times a-day. Two days after he began with the last dose, he complained for the first time of griping and diarrhœa; a grain of opium was directed to be taken at bed-time, and the same quantity of the salt was continued. In two days these symptoms disappeared; the ulcer was nearly healed, the swelling in the groin advanced towards supuration. In two days more, the ulcer was healed; but the abscess broke, discharged but little pus, and, at the end of nine days, was perfectly healed without the slightest degree of induration. Received on the 11th of June; ulcer healed on the 22d; the bubo cured on the 30th of the same month.

The above seventeen cases, were the effect of a primary or original infection. None of the patients, as far

as could be ascertained, had taken mercury, or any other remedy. All were directed to wash the ulcers frequently with a lotion composed of one grain of the acetite of lead, dissolved in two ounces of water. No particular diet or regimen was prescribed, except to the persons affected with phymosis, who were directed to stay in their room, or in bed. In some, a slight affection of the salivary glands was observed; but in none did a real salivation occur. In all the remedies were continued for some days after a complete cure was effected. The diet was of two kinds: one consisted of milk, with meat, bread, and a pint of beer; the other of meat, with a sufficient quantity of bread and vegetables, with a quart of beer.

From these experiments, of which I have just given a faithful analysis, it appears, that the nitric acid, the citric acid, the oxygenated muriatic acid, (that is, water saturated with oxygenated muriatic acid gas,) and particularly the superoxygenated muriate of potass, possess the power of curing the primary symptoms from syphilitic virus, or the syphilitic complaints dependent on a primary infection, without producing salivation.

Dr. Rollo adds, in a supplement at the end of the work, that from the trials made by several surgeons in the artillery, the nitrous acid proved equally efficacious in the cure of cases of secondary infection.

The general effects produced by these four oxygenated remedies, were, an increase of appetite, a more copious secretion of urine, thirst, a white tongue, and an increased action of the whole system; accompanied, for the most part, by a disposition in the blood to form the inflammatory, or buffy coat, as it is commonly termed. The oxygenated muriatic acid appears to be

the most powerful, the citric acid the least so;* the nitrous acid sometimes affected the bowels. The super-oxygenated muriate of pot ss occasioned thirst, and increased the action of the heart and arteries to a greater degree than the other acids; but it scarcely increased the quantity of urine, or the appetite. Consequently, the effects produced by these different remedies, appear to be, an increased action of the whole system, accompanied generally by a disposition in the albuminous part of the blood to coagulate.

Some months after these experiments were published in London, citizen Alyon read to the Society of Medicine in Paris, on the 7th of Messidor in the year 5, (June 1797,) a Memoir on the antivenereal and antipsoric properties of oxygen, from which I have extracted the following passage.

“ Who ever, says he, considered metallic mercury as possessing antivenereal properties? Does not every one know, that several pounds may be swallowed, and pass through the body, without producing the slightest effect. But now that it is ascertained that mercury is the most oxidable of metals, that simple agitation in the air is sufficient to make it combine with oxygen, that the saliva will oxidate it; and that, on the other hand, it readily parts with its oxygen; if we attend to the facility with which oxygen unites with animal matter, to the tendency the latter has of depriving the acids and oxides of their oxygen, we shall readily understand the

* It deserves to be noticed, that, in these experiments, the syphilitic ulcers disappeared equally under the use of the citric acid; an acid which is decomposed with great difficulty: while all the other remedies employed in these experiments, are readily decomposed, and leave the oxygen disengaged.

modus operandi of the preparations of mercury. From these acknowledged facts, if we wish to discover an antivenereal agent, an active and permanent stimulus, we must select a substance abounding in oxygen, and readily yielding this principle to animal matter."

Adopting these principles, citizen Alyon employed several combinations of oxygen as antisymphilitic: he tried an ointment composed of lard and nitric acid, likewise a solution of the superoxygenated muriate of potass, externally, for diseases of the skin, and for syphilitic ulcers: he assures us, that in several cases, he obtained from these preparations more immediate and more decided effects than from the mercurial articles hitherto employed.

Some time after, experiments were made, in the hospital attached to the medical school at Paris, in order to ascertain, with greater precision, the effects of these oxygenated articles in different syphilitic complaints, local and constitutional.

For this purpose, twenty-six patients were selected, and the treatment was entrusted to citizen Alyon, accompanied by a committee appointed by the medical school. Thouret, Fourcroy, Mahon, Hallé, Petit-Radel, and myself, composed this committee.

I shall now give the history of these twenty-six patients, and the result of the treatment.

Bergeron, admitted on the 9th of Ventose. A suppurated bubo. Went out on the 27th of Floreal, with a slight swelling about the size of a hazel nut. Nineteen ounces, two drachms, one scruple, of nitric acid.

Theri, admitted on the 9th of Ventose. Phymosis and shanker. Went out on the 12th of Germinal, cured; six ounces, two drachms.

Vandenoot, admitted on the 9th of Ventose. A shanker and gangrenous inflammation of the prepuce. Went out on the 7th of Floreal, not cured; twelve ounces.

Thebert, admitted on the 9th of Ventose. Indolent bubo. Went out on the 9th of Floreal, having a slight swelling in the groin; twenty-one ounces, seven and a half drachms.

Ponsac, admitted on the 9th of Ventose. Pustules and a bubo. Went out on the 29th of Floreal, with two dry pustules on the scrotum, and the bubo imperfectly cicatrized; eighteen ounces, three and a half drachms.

Deshaies, admitted on the 9th of Ventose. Bubo. Went out on the 21st of Floreal. He was seen some time after with a shanker on the prepuce; sixteen and a half ounces.

F. Guillot, admitted on the 9th of Ventose. He went into the venereal wards as not cured, where he was cured by the nitrate of mercury. Went out on the 17th of Floreal; sixteen ounces, five drachms.

Delaunai, admitted on the 17th of Floreal. Pustular tubercles on the scrotum, and about the anus. Went out on the 22d Prairial, nearly cured; ten ounces, seven drachms.

Garnier, admitted on the 28th of Floreal. Blennorrhagia, shankers, and phymosis. Went out on the 29th of Messidor, cured; seventeen ounces, seven drachms.

Paris, admitted on the 18th of Floreal. A corroding ulcer on the glans and prepuce. Went out on the 3d of Thermidor. Cured of the primary symptoms, but not of the pains; sixteen ounces, six drachms.

Charles René, admitted on the 28th of Floreal. Two buboes and a shanker. Went out on the 11th of Messidor, cured; fifteen ounces, seven drachms.

Loiseau, admitted on the 7th of Prairial. Shanker, bubo, blennorrhagia. Went out on the 11th of Messidor, supposed to be cured, although there was an induration round the cicatrix of the shanker. Nineteen ounces, two drachms.

Leclerc, admitted on the 8th of Prairial. Phymosis and shanker. Went out on the 11th of Messidor, cured. Twelve ounces, two drachms.

Leroi, admitted on the 26th of Prairial. Herpetic eruption. Went out on the 5th of Fructidor; the cure doubtful. Thirteen ounces of acid; twelve ounces, three drachms of ointment.

Piot, admitted on the 28th of Floreal. Blennorrhagia, shanker and pustules. Went out on the 29th of Prairial; not cured. Three ounces, six drachms of ointment.

Ferrein, admitted on the 17th of Messidor. Phymosis and gangrene. Went out on the 30th of Thermidor, completely cured. Fifteen ounces, six drachms of acid.

Robin, admitted on the 28th of Floreal. Blennorrhagia and phymosis. Went out on the 3d of Fructidor, completely cured. Twenty-seven ounces, two drachms of acid.

Leroi, admitted on the 27th of Prairial. Several warts on the glans. Went out on the 12th of Messidor: came some days after, with a small wart on the glans. Sixteen ounces of acid.

Facdonet, admitted on the 30th of Prairial. Shanker, phymosis and bubo. Went out on the 11th of Vendémiaire; nearly cured. Forty-two ounces, six drachms.

Lévêque, admitted on the 28th of Floreal. Ulcerated pustules and shankers. Went out on the 25th of Messidor, supposed to be cured. Eighteen ounces, five drachms. Re-admitted on the 18th of Thermidor, with

the same symptoms; and went out on the 29th of Vendemaire, cured. The cure was radical. Two ounces, fifty-eight grains, of the superoxygenated muriate of potass.

François, admitted on the 1st of Thermidor, Shanker on the frænum. Went out on the 3d of Brumaire, having some pustules, which rendered his cure doubtful. Thirty-two ounces, one drachm of ointment.

Dubois, admitted on the 9th of Messidor. Blennorrhagia and warts. Went out on the 26th of Vendemaire, having a small wart on the glans. Twenty-eight ounces, six drachms.

Jaspin, admitted on the 26th of Messidor. Phymosis, pustules on the scrotum, and a swelling in the groins. Went out on the 23d of Vendemaire, not cured. Thirty-five ounces, seven drachms.

N. B. He entered the venereal hospital on the 1st of Brumaire, with shankers on the tongue and the corners of the mouth, and with pustules round the anus.

Ponce, admitted on the 18th of Floreal. Bubo, phymosis, blennorrhagia. Went out on the 10th of Vendemaire, having still a swelling in each groin, and a discharge from the right. Returned to the venereal hospital twenty days after, with the same symptoms, and some cauliflower excrescences, of which he was cured by mercury. He took, without effect, thirty-six ounces, three drachms of nitric acid; and six ounces, seven drachms of the superoxygenated muriate of potass.

Bruant, admitted on the 15th of Fructidor. Herpetic scabs. Went out on the 13th of Vendemaire, cured; still having small chaps on the delicate cicatrices. Eighteen ounces of nitric acid, sixteen ounces of ointment.

Mennier, admitted on the 28th of Floreal. Spreading ulcer in the throat. Went out on the 30th of Messidor, supposed to be cured. Returned with the same symptoms on the 20th of Thermidor, and went out on the 13th of Brumaire, supposed to be cured, though a slight suppuration appeared at the bottom of the pharynx.

N. B. These cases may be divided into three classes: the cured, the doubtful, and the not cured, (by oxygenated remedies). In the first class there are seven, seven likewise in the second, and twelve in the third.

Having received early information of Mr. Scott's discovery, and of the trials made in England, and having carefully attended to the experiments performed at the hospital of improvement of the school of medicine, in Paris, I determined to make some trials with the oxygenated substances.

My first trials were made with the oxygenated ointment, in two cases of primary syphilitic ulcers of the glans and prepuce; and in a similar case with a saturated solution of the superoxygenated muriate of potass, applied externally. In these three cases, the syphilitic ulcers were recent. They were cured very quickly, without the use of any other remedy, internal or external.

Encouraged by these trials, I began to employ the nitric acid and the superoxygenated muriate of potass, each of them largely diluted with water, internally, for the primary and secondary symptoms of syphilis.

In all my experiments, I made use of pure nitric acid, of thirty degrees. I always began with forty or fifty drops of the acid in two pounds of distilled water; and in no instance did I extend the doses beyond one

hundred and twenty, or one hundred and thirty drops a-day.

With the superoxygenated muriate of potass, I began with a scruple, every day, in two pounds of distilled water; gradually increasing the dose to half a drachm and even to two scruples, and in two cases only to fifty grains, a-day.

I have administered these articles to several patients in my private practice, as often as the persons would allow the trials to be made. On examining my journal, I find that I obtained nearly the same results as those obtained from the experiments performed at the hospital of the school of medicine; viz. nearly one fourth of the patients cured, another fourth doubtful, and the other half remaining without any amelioration, and even on the contrary, in some cases, with injurious and dangerous effects. In females, and irritable patients, the nitric acid uniformly produced colics, more or less severe.

Not to swell this chapter unnecessarily, I will select from my journal only three or four of the principal cases in which the oxygenated articles were completely inefficacious.

A captain of a vessel, a man of a strong constitution, for several years had been subject to what he called rheumatic pains in his thighs and arms, for which he had taken a variety of remedies with scarcely any success. The complaint for which he consulted me, was an eruption over the whole hairy scalp, but particularly about the ears, forming excoriations and very disagreeable scabs, which prevented him from going into company: he complained, at the time, of erratic pains in different parts of the body. He acknowledged, that he

had been several times affected with syphilis, of which he considered himself to be cured, having taken pills and other preparations of mercury, and among others, corrosive sublimate, commonly called the liquor of Van Swieten. I proposed to him the use of nitric acid, in water, and a suitable diet. He began with sixty drops in a bottle or two pounds of distilled water; and the dose was gradually increased, in the course of six weeks, to two drachms and a half of the acid daily. During the use of this remedy, he complained very much, especially for the first fortnight, of colic during the day, and of pains, especially in both knees, during the night. From this period he was free from colic, and the nocturnal pains in his knees changed to erratic pains in different parts of his body. On the twentieth day a general eruption appeared on his body in the form of syphilitic spots and pustules: at the same time, the eruption on the hairy scalp and on his ears increased. Nevertheless he continued, after a great deal of persuasion, the use of the nitric acid for several weeks. Not perceiving his disorder in any degree diminished, he refused to continue this remedy, and he would not consent to take any other. I had lost sight of this patient, when, near a year after, I met him accidentally in the street: he appeared in good health, and he stated that he really was perfectly well. That he continued to labour under his old complaint for several months after I left him; that the eruption on the hairy scalp and the tetters on his ears increased, and at length extended over his forehead and body: that an acquaintance had advised him to undergo a course of mercurial frictions: that at length he followed this advice: that after continuing the frictions for three weeks, his disorder had

gradually diminished, and had finally completely disappeared; and that for two or three months he had been perfectly well.

A young woman, twenty-four years of age, of a delicate constitution, had unfortunately contracted, from a man she was to marry, syphilitic ulcers in the vagina, at the time she became pregnant. A surgeon advised mercurial frictions. The ulcers healed, and some months after she was delivered of a dead child. Some time after, a herpetic eruption appeared on her face, which was supposed to be owing to the driving back of her milk, and for which various remedies were prescribed. The eruption disappeared, and soon after ulcers appeared on her legs, on the tibia and on the knee, for which the same surgeon gave her mercurial pills: the ulcers healed, and she discontinued to take the pills. Some time after, she felt a soreness in her throat, which disappeared on the use of gargles and purgatives; but soon after, the ulcers broke out again on her legs. She observed, that when the ulcers disappeared by the application of external remedies, her throat became affected, and *vice versa*. At length the disease appeared to be fixed particularly in her nose and throat. Mercurial frictions were prescribed, and continued till a salivation came on, and she felt no more soreness in her throat. Believing herself to be radically cured, she discontinued the mercurial frictions; but the ulcers soon returned in her throat. Mercury was again administered internally, with some decoctions. The season being severe, a salivation appeared, and in this state she consulted me. She talked through her nose. I discovered several cicatrices on the tonsils and palate, and the uvula was nearly destroyed; but the greatest disease was in the pharynx. A large

ulcer occupied the space between the Eustachian tubes and the orifice of one of these tubes. She swallowed with difficulty, and was extremely debilitated; she complained much of pain across her breast and the pit of her stomach, and of headache, and of pain in her ears and in the inside of her nose.

I began by administering the nitric acid with water internally; and twenty grains of the superoxygenated muriate of potass, in a pound of water, as a gargle. I gradually increased the dose of nitric acid, from fifty to a hundred drops a-day.

After having employed these articles for a fortnight, there was not the least sign of amendment; on the contrary, the pains of which she complained in the beginning, were become more violent; the ulcer was increased, and she experienced greater difficulty in swallowing; whatever she attempted to take, liquid or solid, returning by the nose. I desisted from the use of the nitric acid, and gave her opium. I began with twenty drops of liquid laudanum, adding to this dose twenty drops a-day: when the dose amounted to eighty drops, the patient appeared better; but when it amounted to one hundred and twenty, she experienced some uneasiness in her stomach, and remained drowsy day and night. All this time, the ulcer remained unaltered. At the end of a fortnight, I omitted the opium, and resumed the use of the oxygenated remedies; but instead of the nitric acid, I gave her, for a beginning, four grains of the superoxygenated muriate of potass in distilled water, in the morning; and repeated the dose at night. The first dose of this salt excited colic, which after the second dose became more violent, attended with tenesmus, and continued the whole day.

I advised the patient to take, every night, thirty drops of laudanum, and to continue the four grains of the superoxygenated muriate of potass four times a-day. In four days the ulcer, having increased greatly in breadth and depth, rendered very difficult the swallowing even of milk, which had been her chief diet for ten days. I directed her to increase the dose of salt to fifteen grains, four times a-day, and to take thirty drops of laudanum every evening.

After continuing this plan for ten days, she was sensibly better. The remedies were therefore continued; but six days after, she complained, that her swallowing was more difficult than ever: her tongue was furred, and the ulcer had a white lardaceous covering. I began to touch the ulcer every day with a saturated solution of the superoxygenated muriate of potass. In ten days the white covering separated partially, but the next day it was renewed.

The dose of the superoxygenated muriate of potass had been gradually increased to forty grains a-day. Six weeks had elapsed since she began to take this salt: the ulcer, however, was still covered with a thick white coat, and the difficulty of swallowing was increased. In this state I touched the ulcer with the superoxygenated muriate of antimony, and I increased the dose of the salt to forty-five grains a-day. At the end of five days all the symptoms were aggravated to such a degree, that I entertained serious apprehensions for the life of the patient. The ulcer had spread considerably; the dysphagia was almost complete; the headache and pain in the ears were excruciating; and her strength was so reduced, that she had not the power to raise herself in

bed. Her pulse was frequent and small. Her life was in jeopardy.

Under these circumstances, I should have reproached myself had I persevered any longer in the use of oxygenated remedies; and reflecting on the means for saving the patient's life, I saw no other resource than in mercury. I therefore directed her to rub in, every evening, on her cheeks and gums, four grains of the muriate of mercury, prepared by precipitation. On the third day she began to feel better. In seven days, she was much better; the ulcer, however, remained nearly in the same state. But continuing the frictions regularly, on the sixteenth day I observed, for the first time, that the ulcer was cleaner and rather redder; deglutition was easier; the patient slept well, and her appetite began to return. Her gums began to swell. The frictions were therefore omitted for two or three days; still I ordered her to gargle her throat with the *lotio syph. lutea*. The ulcer in the throat assumed a better aspect, and began to decrease; but she was still tormented with pain in the base of the skull, behind the *velum pendulum palati*. The frictions were renewed, and she was directed to take a scruple of powdered *sarsaparilla*, twice a-day, in milk or broth.

This regimen was continued all the month of *Germinal*. The symptoms gradually subsided, and reduced as she was, she began to recover strength. The diet and medicines were continued during the month of *Floreal*. She complained occasionally of pain in her ear, on the side where the opening of the Eustachian tube was corroded, and she was nearly deaf. The ulcer, however, continued to mend. At the close of this month, her *catamenia* returned, after an interval of a year. At the

end of this month, likewise, her gums and teeth became again affected by the frictions. The ulcer was not yet healed. Instead of the frictions, I prescribed the pilulæ ex hydrargyro mellito; the powder of sarsaparilla to be continued; and the lotio syph. lutea, to be injected into her throat twice a-day. By continuing this plan for three weeks, the ulcer cicatrized. I then directed a renewal of the mercurial frictions on the mouth, and the decoction of sarsaparilla, with an equal quantity of milk, to be continued for twelve days or a fortnight. She at present enjoys good health; and a year has elapsed since she was under my care.

A young man, aged twenty-two, perceived three syphilitic ulcers on the inner surface of the prepuce. Eight days after, when I saw him, the ulcers were covered with a thick white layer. I administered the superoxygenated muriate of potass to the extent of twenty grains a-day, and directed the ulcers to be washed with a watery solution of the acetite of lead. Four days after, he was affected with phymosis. He had fever, and his tongue was furred. The ulcers appeared to spread, and four days after I observed a new ulcer at the orifice of the urethra. He was then taking daily forty grains of the salt. I prescribed the remedy to the extent of fifty grains a-day. But the ulcers continued to spread to such a degree, that he was under the necessity of abandoning the remedy, not only on account of the bad state of the ulcers, but also on account of the febrile symptoms. The patient had taken in all, one ounce of the salt. I directed the prepuce to be rubbed with mercurial ointment. In a few days, by the use of this remedy, the phymosis was so far reduced as to permit the glans to be uncovered. I then perceived an ulcer near the frænum, and two on the inner surface of

the prepuce; opposite to these the glans was ulcerated: this ulcer, covered with a white layer, extended to the orifice of the urethra. He took, by my directions, the oxide of mercury with mucilage. In six days, the ulcers were greatly improved; and by continuing these remedies for three weeks, he was perfectly cured.

In these instances of primary syphilitic ulcers, the oxygen contained in the superoxygenated muriate of potass, though given in large doses, and continued for a length of time, did not, in any degree, improve the state of the patient.

In the first case, it is remarkable that the oxygenated remedies, though given to a great extent, produced no inflammatory symptoms, no increased action of the arterial system; on the contrary, the debility increased rapidly, and would have destroyed the patient, had she not been visibly, and even very quickly, preserved by the mercurial frictions in the mouth.

A young man, thirty years of age, and of sound constitution, contracted a gonorrhœa on the 1st of last Messidor. On the 18th, the disease was nearly cured, when he perceived, on the edge of the prepuce, an ulcer which appeared to extend from an ulcer more deeply seated: this opinion was merely conjectural, for the patient had a natural phymosis. I dressed the ulcer on the edge of the prepuce, with the red oxide of mercury. On the 27th, this ulcer was nearly cicatrized; but the discharge of purulent matter from the prepuce evinced the existence of an ulcer under the prepuce. I directed him to take the nitric acid, diluted with water, for eighteen days; and to inject a weak solution of the acetite of lead between the prepuce and glans, three or four times a-day. The running decreased so much, that

the patient thought himself cured; but twelve days after, he observed a periostosis on the tibia, and a soreness of throat, which he believed to be catarrhal; on examination, three days after, I discovered that the disease was evidently syphilitic. The velum and tonsils were very much swelled, and very red, and there was a hole on the right side of the velum. I prescribed a course of mercury, which mitigated the symptoms; and the mercury being continued for a month and a half, the patient was radically cured.

Upon comparing these experiments and observations, there can be no doubt that the oxygenated remedies operate with considerable power on the human system, and that consequently they may be employed with great advantage in many diseases. But, on the other hand, it appears, that whatever efficacy these remedies may possess in the cure of syphilis in warm climates, and of some primary affections, in the cold and temperate climates of Europe, they are not articles on which we can rely for the cure of primary syphilitic complaints in general; and still less for the radical cure of secondary syphilitic symptoms, or confirmed lues. For experiments conducted with the greatest precision, and observed with the strictest attention, have convinced me, that the oxygenated remedies, administered internally or externally, though they often cure primary syphilitic ulcers on the genitals, produce no decided effects on buboes, nor on blennorrhagia; and that, in general, their effects on the syphilitic virus, when affecting the system, were nugatory, or too precarious to be relied on. In thus offering my opinion respecting these remedies, I have a reference to the cold and temperate climates of Europe; for I am by no means disposed to decide on their effects in warm

climates. The enlightened physicians who practise in Spain, Africa, or in India, &c., must determine how far their effects are different from what we have observed.*

From what has been stated, I shall draw the following conclusions.

1. Mercury, in the metallic state, exerts no action in the human system.

2. It acts on the body generally, and on syphilis in particular, only when it is combined with more or less oxygen.

3. It seems to act on the body, and on the syphilitic virus, with a power proportioned to the quantity of oxygen with which it is combined; and its action is greater or less, according to the degree of oxidation.

4. From the principle laid down in the preceding number, the preparation in which oxygen is more feebly and less abundantly combined with mercury, as in the gray oxide of that metal, must be weaker in its action, and must require a larger quantity, to produce any sensible effect on the syphilitic virus, than if preparations are employed in which the oxidation is more perfect, and the metal combined with a larger proportion of oxygen. According to this axiom, the gray oxide of mercury will possess the least power; the next in order would be the red and yellow oxides; then would follow the acetite, tartrite, and muriate of mercury, as being more active; then the nitrate; and finally, the oxygenated mu-

* Such of my readers as wish to be more fully informed of the inefficacy of the oxygenated remedies in the cure of syphilis, will consult, with advantage, the work of Mr. Blair, surgeon of the Lock Hospital, in London, entitled "Essay on the Antivenereal Effects of Nitrous Acid, &c." London, 2 vols. 8vo. 1799.

riate of mercury would occupy the highest rank in this scale, which is confirmed by accurate observation.

5. Mercurial preparations, administered for some time, produce in the body symptoms of cachexy, and of general debility; but the oxygenated articles, such as the nitric acid, and particularly the superoxygenated muriate of potass, produce effects diametrically opposite; for they excite the arterial system, give tone, and occasion inflammatory symptoms.

6. In the experiments made seven years ago by Professors Fourcroy and Vauquelin, in a course of chemistry, at the Lyceum, by mixing the oxides and the oxygenated muriate of mercury with the albuminous part of the blood, this fluid was coagulated, and the mercury was precipitated in the form of a dark gray powder, that is partially reduced.

7. Practical observations evince, that a similar decomposition actually occurs in the living body, when any preparation of mercury is administered; for we observe that watches, rings, and other articles of gold, worn by the patients during the use of mercury, are whitened whenever the mercury conveyed into the system passes off by perspiration. If the mercury passed off in the form of oxide or salt, the state in which it was given, it would not whiten gold. The same decomposition is often observed, on applying the mercurial oxides to ulcers.

8. Several respectable writers have related numerous instances of dissections, performed on the bodies of persons who died after having taken large quantities of mercury, for the cure of syphilis. Mercury, in the metallic state, was found in the great cavities, as the abdomen, thorax, brain, bones, &c. Those readers who

are desirous of knowing the authors who have recorded these phenomena, may consult particularly the works of Brassavola, Bonnetus, Schenkus, and especially of Fallopius and Fernel. In some instances, the facts are so evident, that nothing but the grossest scepticism can refuse assent. I have met with a remarkable observation, though I do not at this moment recollect the author, where on dissection, the lungs were found filled with little tubercles, each containing a small globule of mercury. Previous to his death, the patient had taken large quantities of this metal in a state of oxidation. In this case, the mercury decomposed in the blood was diffused by a species of injection or extravasation in the ultimate vesicles of the lungs; and I am fully persuaded, that in many instances, the violent pains in the head, bones, or muscles, depend on a similar extravasation of metallic mercury, irritating the parts as an extraneous body, especially when it is interposed between the sheaths of the muscles and tendons.

From all these different views, it appears, that mercury still maintains its ancient and first rank in the cure of syphilis; but it requires to be combined with oxygen to act with energy on the system in general, and the syphilitic virus in particular; but the mercury absorbed and carried into the system in the form of an oxide or salt, comes in contact with the syphilitic virus, or with the matter or fluid with which the virus is united or combined, changes *ipso facto* the nature of the virus, destroys or renders it inert. It appears, that there is a decomposition and new combination of the constituent principles; and that the mercury, in losing its oxygen, recovers its metallic state, and is expelled in this form as extraneous matter from the blood, by perspiration or some other excretion; but that it is divided into glo-

bules infinitely minute, and consequently invisible to our eyes.

9. From these observations and reflections, there appears to have been a fallacy in the conclusion too hastily drawn, that the effects produced by mercury were entirely owing to the oxygen alone, to which the mercury merely acted as a vehicle, and which it will readily abandon when in the body. In our climates at least, it appears, that something more is required than mere oxygen, for the radical cure of syphilis; and that in the effects produced by the different mercurial preparations, the mercury is an important agent: that to the mercury, combined with oxygen, must be ascribed its effects in curing syphilis, and that we must have recourse to mercury, at least in the climates beyond 45° of latitude, for effectually and radically destroying the various modifications of this disease; that though the preparations of mercury appear to act in proportion to the degree of oxidation, it is not well established, that they act in the same proportion on the syphilitic virus. In fact, I possess several observations, which prove that the oxygenated muriate of mercury, for instance, generally alleviating the more violent symptoms very soon, does not radically cure the disease, even when the use is continued for a great length of time; that the oxygenated remedies, without mercury, are uncertain remedies; and that for the radical cure of the various symptoms of syphilis, mercury is intitled to the first rank, at least in the climates of Europe.

10. But these oxygenated remedies may probably be employed with great advantage, in many cases which frequently occur in practice, in which mercury cannot be administered without inconvenience, or even without endangering the life of the patient: it is especially when

syphilis is combined with scurvy, or when the patient is very weak, that these remedies particularly deserve to be tried for the cure of syphilis, in warm climates, previous to the exhibition of mercury; and that these remedies would probably afford very great relief to those suffering, in such climates as Sennaar, where, according to Bruce, (*Voyage to Abyssinia*,) syphilitic complaints, which are very common, are exasperated instead of being mitigated by the use of mercury.

But the properties of medicines are not to be established by analogical inductions; it is only by correct observation, and by well authenticated facts, that we can acquire an accurate knowledge of the real effects of medicines on the human system. We look to philosophic practitioners, to repeat and vary the experiments with these new remedies in the different climates of this globe, carefully noting the results and all the attending circumstances; the patient's age, constitution, previous diseases; the actual state of his health; the peculiar symptoms of the syphilitic complaints with which he is affected; whether the disease proceeded from a primary or secondary infection; if he has used mercury or other remedies; whether the symptoms, once removed, do not return in a few weeks or months after.

CHAPTER XXIV.

On different other Remedies, besides Mercury, recommended for the cure of Syphilis.

BESIDES the internal and external use of the different preparations of mercury, and of the oxygenated medicines described in the preceding chapter, many other remedies have been tried and recommended, either for the cure of syphilis, without mercury being employed, or for assisting the operation of mercury.

From the most ancient authors who have written on the use of mercury in the cure of syphilis, it appears, that they early perceived, as we often observe at the present time, that in many cases, during the use of mercury, disagreeable or dangerous symptoms were frequently produced; or that after the cure of syphilis, serious and distressing complaints remained; or finally, that there were instances where mercury failed of effecting a cure. Hence a remedy has been long sought for, which might possess the efficacy of mercury, without partaking of its noxious properties.

In this chapter I shall notice first, the remedies which have been recommended and employed to assist mercury in its operation, and to render its action on the virus more effectual and certain, or to prevent its injurious effects on the stomach and system. I shall, in the next place, discuss the merits of the different remedies recommended and boasted of as curing syphilis, without the use of mercury.

I shall not, at present, treat of the different remedies required in syphilis, when complicated with other complaints: this will be the subject of a particular chapter.

Many vegetables, among which I will specify the *guaiacum officinale*, the *laurus sassafras*, the *smilax sarsaparilla*, the *smilax china*, &c. which were employed soon after the discovery of mercurial remedies for the cure of syphilis, are successfully administered in many cases, conjointly with mercury, either as a convenient vehicle for introducing it into and diffusing it through the blood, or for determining it to the skin, after its effects are produced; and by thus expelling it from the system, to prevent the evil consequences which might be apprehended from its remaining in the system.

We employ different parts of these plants, principally in powder or in decoction. The root of *sarsaparilla*, though devoid of sensible qualities, has maintained its reputation more than any other; and from very strict and accurate observations made especially at St. Thomas's Hospital, in London, it is used with advantage in several syphilitic complaints, either in conjunction with mercury, or after this remedy has been discontinued, for curing the dregs which the mercury had not destroyed. A drachm of the powder is given repeatedly in the day, or it is administered in decoction. See *Decoctum smilax sarsaparilla*, ph: syph.

Of the remedies which have been employed for the cure of syphilis, *guaiacum* is the next in point of antiquity to mercury,* according to the united testimony

* It was used even before 1517, and was in such repute, that it had almost superseded the use of mercury; but the latter was not long in recovering its rank in the *Materia Medica*. From 1497, mercury had been employed externally, and soon after it was administered internally.

of contemporary authors, many patients, among others the celebrated Van Hutten, were cured by this remedy. At present, in our climate, we place no reliance on this remedy alone, for the radical cure of syphilis; but we frequently employ both the wood and the gum resin of this tree with success, in decoction or tincture, conjointly with mercury. See *Decoctum Guaiaci officinalis*, ph: syph.

In many cases, a no less efficacious mode is, the combination of mercury with opium. Many patients cannot take the oxides or salts of mercury, without experiencing cardialgia, colics, and diarrhœa, &c. In others, a morbid irritability prevails in the affected parts, or in the general system, which precludes the use of mercury, and which renders it dangerous or inert; in all these cases, opium often proves an excellent auxiliary to mercury. But it is not only in these cases that opium proves beneficial; it often cures malignant syphilitic ulcers, which have resisted a complete course of mercury. For the discovery of the efficacy of opium in these cases, we are indebted to the nice discernment of my friend Dr. Nooth. It deserves to be inserted in this place.

A young man, a student of medicine in London, had been for a long time tormented with very distressing syphilitic symptoms, and particularly with ulcers in the throat, of a very malignant character. A complete course of mercury had been tried in vain. From the want of sleep, and from the despondency of the patient, fears were entertained that he must soon sink absolutely exhausted. In these distressing circumstances, some one advised the use of opium, more with the view of

allaying his sufferings, than with the expectation of effecting any permanent benefit. He began with one grain, and gradually increased the dose. This remedy restored his sleep, his strength returned, the ulcer assumed a better aspect, the pains were mitigated, all the other symptoms abated; finally, at the end of a short time, the state of the patient was as promising, as it had been deplorable previous to the exhibition of the opium. He was perfectly cured.

Some years after, Dr. Nóoth, then inspector general of the English military hospitals in America, recollecting this singular case, proposed new trials to be made with this remedy; and with this view, patients were selected, labouring under symptoms analogous to those affecting the patient whose history has just been related. Many of these patients had taken mercury without effect; others were under a mercurial course, without any signs of amendment; others had not yet taken any mercury. Opium was administered in doses of one grain, and successively increased to five grains, and in some cases to eight grains a-day, and even in larger doses. In such large doses it did not appear to induce sleep; but it produced a certain state of repose, and allayed all painful sensations. In a few days, it was observed to effect a beneficial change. The hardness and inflammation of the tumours subsided, the discharge was better, and the syphilitic ulcers assumed a more favourable aspect. The opium was continued; and sooner than could be expected, those who were subjected to this treatment were relieved of all symptoms of syphilis, and radically cured of their ulcers.

It is worthy of remark, that, notwithstanding the use of opium, the patients had generally their bowels open,

even when they took ten or fifteen grains a-day. If, however, costiveness did occur, it was easily obviated by small doses of salts.

In London, and particularly in the Infirmary in Edinburgh, these experiments with opium have been repeated in cases and circumstances nearly similar; the results were: 1. That opium given in conjunction with mercury, often cured malignant syphilitic ulcers, more rapidly than mercury, when given alone. 2. That opium often cured these malignant ulcers, especially in the throat, after a complete course of mercury had failed. 3. That opium improves the condition of syphilitic ulcers, without mercury being administered; but as far as could be observed, in no instance were these ulcers radically cured, unless the patient had previously taken mercury; or in order to produce this salutary effect, it became necessary to administer mercury, in conjunction with opium.

In some cases, during or after a mercurial course, opium is sometimes advantageously administered with iron. In some instances, I have observed excellent effects from this remedy, in others from an extract of the bitter plants, as of the leaves of the *juglans regia*, of the *antirrhinum-linaria*, of the *menyanthes trifoliata*, of the *humulus lupulus*, of the *amygdalus persica*, of the *teucrium scordium*, &c., after having employed a course of mercury without success.

Mr. Birch, of London, whom I have had occasion to mention in the preceding chapter, has observed, that the drawing of electric sparks, or mere electric frictions (the patient being insulated) performed every day during a mercurial course, rendered the action of mercury

more powerful, by determining this action towards the parts affected with local syphilitic symptoms.

Many writers have recommended, under particular circumstances, especially where there was great irritability or weakness, the use of mercury, combined with cinchona. But we know, from the discovery of citizen Berthollet, that the astringent principle in the *cinchona officinalis*, decomposes the oxides of mercury and of antimony in the stomach, by uniting with their oxygen, and renders them perfectly inert. Thus, the practitioner who intends to administer in this way, a more complete course of mercury, and the patient who imagines that he has gone through a complete salivation, are both most miserably deceived. The disease obstinately resists the combined use of these remedies, or vanishes for a time, and then returns with redoubled force.

Many patients probably owe their lives to this ignorance on the part of the practitioner, respecting the mutual decomposition of mercury and cinchona. For I see, every day, weak and delicate persons of both sexes, to whom ignorant practitioners prescribe, and often in very large doses, corrosive sublimate united with a decoction of cinchona; indeed, without radically curing the pox, but also without producing the violent and dangerous symptoms which this acrid remedy would occasion if administered without the decoction. Thus it is often owing to a double error in an ignorant practitioner, that the poor patient is preserved.

Finally, the warm bath, or under particular circumstances, the vapour bath, proves very efficacious, in conjunction with the administration of mercury, by rendering the latter more certain and less dangerous in its operation. They are often sufficient of themselves, in

warm climates, for checking and allaying the disease, without the use of mercury. I shall speak more fully of them, in the second section of the present chapter.

In the 15th chapter, I have laid down the rules and precautions to be observed in the application of warm baths. I shall therefore confine myself to a few remarks on the use of this remedy, and the prejudices very generally prevalent respecting its effects on the human system.

In the first place, it is very certain that the application of a gentle heat to the surface of the body, by means of the bath, excites the vessels and excretory ducts of the cutaneous glands, increases their secretion, at the same time that it produces an agreeable sensation and cleanses the skin. To produce these effects, the temperature of the bath must not be less than 96 or 97 degrees of Fahrenheit, or 29 or 30 degrees of Reaumur. If its heat is below that of the human body, the bath will act rather as a cold than a warm bath. At this temperature, the warm bath does not relax and debilitate, as most patients and even many practitioners imagine, provided the patient does not excite sweat by going immediately to bed, and does not use it to excess. On the contrary, it gives tone and vigour to the system, with a sense of alertness; as any one may be convinced, by coming out of a well regulated warm bath, in a warm summer's day. The person who was before languid and oppressed, will feel strong and active. But the abuse of this, as of all other means, may unquestionably prove injurious. The idea that the warm bath disposes a person to catch cold, appears to be a mere prejudice, and is owing to the misapplication of the term warm bath to what is really a cold bath, or to the body not being

suitably covered after bathing. The debility and relaxation, of which we hear so many complaints, are not attributable to the warm bath, but to the patient's clothing himself too warmly, especially to his putting on flannel next his skin on leaving the bath, which excites profuse perspiration and causes debility.

Besides the effect of the warm bath on the surface of the body, there is another, no less remarkable and equally beneficial, arising from the absorption of a considerable quantity of water. On this property of the lymphatic system, depend not only the effects of the various medicated baths, but also of many other remedies applied to the surface of the body, which produce very sudden and surprising effects, and even death; the application of cinchona, alcohol, tobacco, opium, squills, &c. have furnished ample proof, notwithstanding what has been lately advanced against the doctrine of cutaneous absorption.

SECTION II.

As many cases occur, in which mercury fails to effect a cure, or in which the patient cannot bear the use without being exposed to disagreeable consequences, a remedy has been sought for, which, without having any of the noxious qualities of mercury, might have all its powerful and good ones. Most of the quack medicines sold and praised as preparations from the vegetable kingdom, for this purpose, I have been at pains to analyze, and have generally found them to be nothing but one or other mercurial preparation, disguised with some vegetable syrup or decoction.

In the preceding chapter, I have explained my opinion respecting the virtues of oxygenated remedies: I consider them as insufficient, at least in our climate, for the cure of genuine syphilis. But they deserve to be tried in every case where mercury fails, and particularly in complicated cases of syphilis. And in some cases they might be advantageously employed, in conjunction with mercury.

Several remedies have been recommended, as succedaneums for mercury, for the cure of syphilis, which have been made use of for this purpose, we are told, with success, before or since mercury was known. Some, we are credibly informed, are even at this time actually employed with the best effect, in South as well as in North America, for curing the disease radically without mercury. Such of them as I have seen employed for the same purpose in Europe, have generally failed; and I have never yet seen one instance of confirmed syphilis, radically cured without mercury. For, in all the cases which have come under my notice, the patients had either taken mercury before these remedies were employed, or were obliged to have recourse to it some time after; for the disease not being radically cured, had returned when the patient thought himself completely cured by these remedies. This I have observed, especially, in the wood of the *guaiacum officinale*, in the bark of the *laurus sassafras*, in the root of the *smilax sarsaparilla*. The same I have noticed in opium, ammonia, lizards, the resin of guaiacum, and the different vegetable syrups or decoctions, so much extolled and recommended in France and in England.

I have seen the decoction of *guaiacum*, with the bark and root of the *daphne mezereum*, a strong decoction of

sarsaparilla, given freely, and likewise large doses of opium, and various other remedies and decoctions, cure sometimes radically syphilitic complaints, in which mercury, though frequently repeated, had failed. This is all I can state with certainty; but I am of opinion, that in temperate climates there can be no well founded hopes of radically curing confirmed syphilis by these means, without the use of mercury.

Besides the above remedies, there are others which are worthy of our attention, and certainly deserve a fairer trial than has hitherto been bestowed on them, in order to ascertain their power, especially such as are recommended by men of knowledge and observation; as the root of the *lobelia syphilitica*, with which we are informed, by Dr. Kalm and Mr. Bartram, the inhabitants of North America cure syphilis as effectually and radically as we do with mercury.* They take a handful of the fresh, or what is stated to be better, of the dried plant: they wash it, and boil it in a gallon and a half of water; of which decoction the patient drinks every day, if his constitution will bear it, a quart in the beginning, gradually augmenting the dose, till he can no longer support the purging excited by it; then he leaves it off for a day or two, and if necessary continues it again, till he finds himself perfectly well, which is for the most part in a fortnight. If there is any external disease they

* The latter author advises the patient to take two gills of this decoction, three times a-day, on an empty stomach, and augment the dose according to the strength of the patient; making use of warm baths, and a proper diet, at the same time. Care should be taken not to make use of the *lobelia longiflora*, instead of the *lobelia syphilitica*; the former being of a much more acrid nature than the latter.

wash the affected parts with the same decoction. If the disease is very obstinate, they mix with the *lobelia* the root of the *ranunculus abortivus*, but in a small quantity on account of its acrimony. In order to heal the syphilitic ulcers, they sprinkle on them the powder of the dried root of the *geum nivale*. They also cure deep and putrid ulcers by the external application of the powder of the inner bark of the *Ceanothus Americanus*.

In South America, and in the East Indies, the decoctions of the woods of guaiacum, sassafras, sarsaparilla and china, have been extolled as remedies, with which alone the most confirmed syphilis may be easily cured. It may be that syphilitic complaints are thereby removed between the tropics, and in the warmer climates of our globe; but in Europe I have never seen one case, where they effected a radical cure, but sometimes rather proved hurtful, producing profuse sweats, hæmoptysis, &c. especially in persons of thin and delicate habit.

The *decoctum lusitanicum*, (see Ph: syph.) is stated to have been employed with great success in the Brazils, in Portugal, and in some other countries.

A decoction of the *agave americana*, has been employed at Naples; and it is stated that ulcers and other syphilitic complaints are sometimes cured by a simple decoction of the root of *cichorium intybus*. In Jamaica, they extol the decoction of the *euphorbia parviflora*. In Guatimala, and in Spain, ulcers and syphilitic complaints of the skin are said to be cured by the small lizard termed *anolis terrestris*. After removing the head, tail, skin and bowels, the patient swallows the lizards raw, in the morning, fasting.

Marsden, in his history of Sumatra, relates, that the

Malays cure themselves of syphilitic complaints by a decoction of the root of the *smilax china*; and adds this curious fact, that the remedy excites salivation; an effect which has never been observed in Europe.

Bruce, in his Travels in Abyssinia, mentions that syphilitic complaints are very common at Sennaar, but never so bad in either sex as to prevent marriage. Sweating and abstinence, he affirms, are sufficient to cure the most inveterate cases. He further adds, what is very remarkable, that mercury aggravates and does not cure the disease.

In Europe, as I have already observed, guaiacum wood has been advantageously employed in decoction; for this reason it has been termed *lignum sanctum*. The celebrated Hutten, a martyr to this disease, states that he was radically cured by this decoction, after having ineffectually tried a variety of other remedies. All parts of the tree, as the gum resin which oozes spontaneously, the flowers, the leaves, are said to be endowed with the same properties as the wood.

The root and bark of the *laurus sassafras*, extolled in the beginning as possessing the same virtues with guaiacum, have not sustained this reputation in Europe.

But the medicinal properties of the root of the *smilax sarsaparilla*, though devoid of flavour or odour, have been confirmed by the ablest physicians of the age: it is, however, never given alone, but conjointly with mercury, or after the ineffectual use of the latter remedy. It is administered in powder, in doses of two drachms, or in decoction, three or four times a-day. This decoction proves particularly beneficial, after mercury has been administered for some time. Sometimes a compound decoction is formed, by adding the root of the *daphne*

mezereum, or of the *daphne laureola*. The latter plants have been found very efficacious, especially in inveterate syphilitic complaints, or when complicated with scrofula. See Ph: syph., where I have inserted the formulas of other decoctions, composed of sarsaparilla, and other plants, recommended by different authors.

I saw a patient in London, who having been affected with syphilitic ulcers which resisted mercury, was cured, as I was informed, by the following means: a pound of sarsaparilla was toasted in a stove, reduced to a powder, and then divided into three portions; the patient took one every day. The person who communicated this fact told me, that many patients, similarly affected, had been cured by this remedy. For want of these plants, the decoction of the *buxus semper virens*, of the roots of *arctium lappa*, of *carex arenaria*, and of many others, are sometimes successfully employed.

In blenorrhagia, in ulcers of the throat, and other syphilitic complaints, which have resisted mercury, the decoction or extract of the *saponaria officinalis* has been recommended for some years. Half an ounce has been given in pills, or dissolved in two or three pounds of water; and the same quantity, dissolved in a pound of water, has been used as a gargle, eight or ten times a-day.

In the memoirs of the Academy of Stockholm for the year 1784, Dr. Byornlund has recommended the decoction of the bark of the *prunus padus*, as very efficacious in many inveterate syphilitic complaints, especially when administered in conjunction with mercury. The same author has found the infusion of the *ledum palustre* very serviceable, in many cutaneous com-

plaints considered as leprous. Other writers have recommended, in obstinate syphilitic complaints, the decoction of the stems of the *solanum dulcamara*.

I mentioned, in the first section of this chapter, the experiments and observations made by Dr. Nooth, on the use of opium; and I shall here add, that this article, dissolved in water or alcohol, has been successfully employed in a topical application. Since then, probably with the same view, the extract of the *conium maculatum* has been recommended, externally and internally, in large doses. In very desperate cases, the same extract, with the yellow hydrosulphureted oxide of antimony, have been given, in doses of fifteen grains of each a-day.

Dr. Peyrihle, some years ago, proposed the volatile alkali in preference to mercury, for the cure of syphilis. This salt enters largely into the composition of the syrup, vended under the name of *Velho's vegetable syrup*.

I know of many patients, unsuccessfully treated for a length of time by mercury, who have been cured by the decoction of sarsaparilla, given in doses of two pounds a-day, to which were added two scruples of the carbonate of soda. In London, the liquid carbonate of potass, in doses of twenty or thirty drops a-day, has been found to produce excellent effects in obstinate ulcers, which had resisted the action of mercury, and of many other boasted remedies.

Dr. Winterl, Professor of Botany at Buda, in Hungary, discovered lately, that the inhabitants on the confines of Turkey cured themselves of syphilis, in all its stages, by a decoction of the *astragalus exscapus*. Dr. Quarin, of Vienna, prepared a decoction with half an ounce of

the root boiled in a pound and a half of water down to a pound. He directed it to be taken warm, night and morning. He tried the decoction in four cases, and he succeeded in all, without the use of any other remedy. The first patient was a woman attacked with erratic pains, and ulcerated tophus. She was cured in four weeks. During the first week the decoction occasioned six or seven stools a-day: during the succeeding three weeks, the stools were not so frequent; but the perspiration and urine were increased. The second patient was likewise a woman, affected with tophus: she was cured in five weeks. The third patient was affected with herpes and syphilitic ulcers, and rheumatic pains: he was cured in six weeks, and in the same way; that is, at first by diarrhœa, and afterwards by increase of urine and perspiration. The fourth was a young man affected with two very large hard buboes: he was cured in three weeks, by sweating and great evacuation of urine, but without diarrhœa. If its virtues are confirmed by future experience, this remedy must prove a valuable addition to the materia medica.

In many cases, where mercury had failed of producing the desired effect, I have employed, with success, a decoction or extract of the rind of the green walnut, *juglans regia*. According to a recent publication, the principal ingredient in the celebrated decoction of Dr. Pollini, lately deceased in Carniola, is the bark of this tree. See *decoctum juglandis pollini*, Ph: syph.

Belet's syrup, which many persons consider as a real vegetable composition, contains the nitrate of mercury, as proved by the very accurate analysis performed by Bayen. But as the remedy is professed to be a secret, the composition has varied in different pharmacopœias.

This syrup is generally composed of the red oxide of mercury, the acetous acid, nitric acid, alcohol, and syrup. Some omit the acetous acid. Sometimes it is prepared by solution, and sometimes by digestion. There is, likewise, great difference in the proportion of acids employed. A formula has been lately published, as affording the most correct process of preparing this syrup. It directs that the mercury should be dissolved in the nitric acid, and the alcohol added to this solution; and after digesting for some days, that the syrup be added. For an accurate knowledge of the different formulas, according to which this remedy is prepared, we are indebted to Bouillon Lagrange, and published by him in the *Annales de Chimie*, vol. 29, page 162, and in the *Journal de Medicine*. The author observes, like an enlightened chemist, that this remedy, prepared by distillation, contains no mercury. In fact, the mercury, precipitated from its solution in the nitric and acetous acid, falls to the bottom of the retort, and if prepared by digestion, it likewise falls to the bottom of the vessel; so that if the patient takes the whole of the liquor, the last portions will contain all the mercury, partly in the state of an oxide, and partly in the form of the nitrate of mercury, which forms a copious deposit at the bottom of the bottle. If the liquor be carefully decanted, it will contain no mercury; this was first proved by Bayen: hence it is, in all respects, an indifferent preparation, which no intelligent or well informed practitioner will employ. There is no doubt, considering the frequent use made of this remedy by many French physicians, even of considerable reputation, that many uncured poxes are owing to the thoughtless indifference with which they prescribe a remedy, of whose compo-

sition they are entirely ignorant, and which either contains no mercury, or so large a proportion of an acrid mercurial salt, that the patient cannot continue the use long enough. That quacks and old women should recommend such remedies, cannot be surprising; but that physicians, and surgeons, who pretend to be acquainted with their professions, and who have any reputation, should make use of such drugs, of such abominable, inert, or dangerous compositions, is really shocking and disgraceful. I coincide with Bouillon Lagrange in opinion, that it is very difficult, if not impossible, to prepare a mercurial syrup with the nitrate of mercury and alcohol, without decomposing the salt; and that all these compositions are articles which only quacks will recommend, but which every enlightened and honest practitioner will reject. I am convinced, with Chaussier, who has performed many experiments with the preparations of mercury combined with the nitric acid, that neither the purity of the articles nor the correctness in the preparation can insure a certainty in the powers of the medicine. Probably for this reason, many apothecaries, possessing more chemical knowledge, are in the habits of vending instead of Belet's syrup, the syrup of Cuissinier, which is prepared in the following manner, and in which they have substituted for the nitrate of mercury, such a proportion of corrosive sublimate, that the patient will take a quarter of a grain, or at most half a grain of this mercurial salt, in a day.

Take thirty ounces of sarsaparilla; infuse them for twenty-four hours, in twenty-two pounds and a half of spring water; boil them down to seven pounds and a half: repeat this operation three times, taking care to decant each time seven pounds and a half of water, and

to add fresh water. Then boil these three decoctions, adding borage flowers, white roses, senna, and anise, of each two scruples, down to one half, in which dissolve four or six grains of the oxygenated muriate of mercury. To the decoction, when cool, add two pounds of sugar, and as much honey, so as to form a syrup to be divided into nine portions; of each the patient is to take one third, at seven and ten in the morning, and at five in the afternoon. The patient's daily drink should consist of six pounds of water in which six drachms of sarsaparilla have been boiled. For these nine days the patient should keep his bed. He should continue to take this syrup and the decoction of sarsaparilla for thirty-one days more: he may go out in fine weather, taking care to return before sunset. At dinner he may eat rice, roasted veal or chicken, without pepper or salt: his supper may consist of the same. This remedy operates by stool, urine, and sweat.

In France, for several years, a composition has been highly extolled under the name of *antisypilitic rob*; and the handbills are stuck on all the walls of Paris, sometimes with the name of L'affecteur, alone, and sometimes with the pompous title of Medical Chemist.

The principal ingredient is the *arundo phragmites*, of which a strong decoction is made, with the addition of sarsaparilla, and towards the close some aniseed is added; and then, with sugar or honey, the whole is reduced to a rob or syrup. The price of each bottle is twenty-four francs.

For two years past, I have been consulted by a great number of patients, who had taken this rob for a long time, and repeatedly, without any benefit: some were worse than before; others, who had ulcers in the throat

and caries in the bones, had become absolutely incurable, the disease having extended to the base of the skull, and other parts of the body. At least two thirds of those with inveterate syphilitic complaints, who consult me, acknowledge that they have taken Laffecteur's antisyphilitic rob.

I disdain to enter into any detail of the low intrigues, and abominable lies employed to bring this remedy into vogue. But when I observe those who are legally styled doctors, recommending it to their patients, I am filled with pity and indignation; for nothing can afford a stronger proof of the degraded state of medicine in France, than to see, that physicians even of the ancient faculty of Paris, prescribe secret and quack remedies, rather than employ those with whose efficacy they are acquainted; or direct the patients to apply to those who are better informed, if they are so ignorant in this branch of the healing art.

Hence we cannot be much astonished, that the government, knowing that physicians employ this quack medicine, has sanctioned it from time to time.

The reader who wishes to be convinced of the truth of what I have stated, need only read the work which Laffecteur advertises, to maintain the efficacy of his rob in the public estimation.

I would not continue this disgraceful part of the history of the treatment of syphilis, if the public, and especially the enlightened physicians of Europe, had not in some degree a right to expect that an author who writes, *ex professo*, on syphilitic complaints, should discuss every thing relative to the disease, remove all kinds of doubt, and expose the vile and fraudulent arts of quacks.

I shall begin by asserting, from my own observations, and from those of the most enlightened physicians and surgeons of Europe; 1st. That I know of no other remedy than mercury, which, in the cold or temperate climates of our globe, will radically cure the pox; that is, those complaints produced in the human system by the real syphilitic virus. 2d. That the preparations of mercury, well selected and administered with judgment and care, keeping in view the habit of the patient, and the different degrees of the disease, are never dangerous; that they radically cure the pox, and only fail in a very few instances. 3d. That in such cases, the decoction of guaiacum, or of sarsaparilla, carefully prepared, alone, or in conjunction with mercury, together with warm and vapour baths, will cure the most inveterate syphilitic complaints as effectually in the present age as in the sixteenth century, when these plants were first employed in France, as they continue to be in England, Germany, Italy, &c., where they have no need of Lafsecteur's antisyphilitic rob. 4th. That in blennorrhagia particularly, I consider the rob prescribed by Lafsecteur, as rather dangerous than salutary: my reasons I will assign presently; and I am convinced that a great many of those patients who have taken this rob for the cure of the disease, and who now suffer disagreeable consequences, would have been radically cured and in perfect health, if they had employed only a light decoction of marshmallows, soapwort, or sarsaparilla.

I will now state what I have really ascertained, respecting the nature or properties, mode of administering, and effects of this rob.

1. The result of numerous trials with the medicine, made by myself and by several practitioners of my ac-

quaintance, and likewise by other impartial and well informed physicians and surgeons, is, that the rob of Laffecteur, administered pure (without mercury) to patients who have not taken mercury, never radically cures syphilis in our climate; or what amounts to the same thing, the instances are so rare, as scarcely to form an exception. There is hardly one or two in a hundred. Some of the patients, indeed, being reduced, as it were, by the severe regimen prescribed by Laffecteur, appear to be relieved of their old syphilitic complaints; but when they have returned to their usual mode of living, and have recovered their strength, they become again affected with the same symptoms of syphilis, for which they had tried the rob.

The antisymphilitic rob, administered *pure* to patients who have already taken mercury without success, often produces neither cure nor amendment: and what is of important consideration, it occasions the loss of precious time, during which they might have had recourse to efficacious and certain remedies, by which they might have been saved. In cases where the rob is employed for complaints which remain after the use of mercury, it alleviates and even cures them; but it does not appear to be more efficacious than sarsaparilla, guaiacum, astragalus exscapus, and many other vegetables described and recommended by different authors, in similar states of the disease. What I have advanced, is fully confirmed by the united testimony of the most respectable practitioners in England and Germany, where this rob is entirely unknown, and where they nevertheless effectually cure those complaints for which the public credulity has considered this as the only remedy. At least I have not observed that, for want of this rob,

more soldiers or sailors die in the hospitals in England and Germany, (where the governments, despising all quack medicines, entrust the sick to the care of the best informed physicians and surgeons,) than in France, where so many ignorant persons believe it to be an infallible remedy.

3. Among the great number of patients who have consulted me respecting their complaints, after having used Laffecteur's rob, some of whom were even taking it in his house, many were affected with a copious and complete salivation, with fetid breath, swelled gums, and loose teeth, who asserted, that they had not taken mercury before. From these facts, it is evident to me, that Laffecteur administers mercury in his rob, and even the most acrid and dangerous preparation, the oxygenated muriate of mercury, or corrosive sublimate; and it is, unquestionably, in all those cases, where he has ascertained, by the questions he puts to the patients, that they have not taken mercury. Indeed, how else can these salivations be explained? for we know of no remedy in Europe, except mercury, which produces this effect. It is therefore a scandalous imposition on the public to assert, as Laffecteur does, that syphilitic complaints are cured by this rob without mercury, when it actually contains the most acrid and dangerous preparation of this metal.

Besides the two methods of preparing the antisyphilitic rob, which I have described, (one without mercury, the other containing corrosive sublimate, at the same time absolutely contradicting the fact,) Laffecteur sells a third composition, under the name of *improved antisyphilitic rob*, which he highly recommends, especially in gonorrhœa. But I will relate what the patients

informed me they observed to be the effects produced by this preparation. They were affected, when using it for gonorrhœa, with bloody urine, and even with hemorrhage from the urethra and bladder; and very often afterwards they laboured under strictures and obstinate runnings. Some experienced spasms in the stomach and breast. Now all these circumstances being taken together, induce me strongly to suspect, that Laffecteur adds to this third rob, either the powder or tincture of cantharides; very acrid articles, and the only ones which, to my knowledge, produce similar effects on the animal economy.

I shall conclude these observations and remarks, by stating,

1st. That the effects of Laffecteur's antisyphilitic rob, without the addition of mercury, are nearly the same as those produced by a strong decoction of sarsaparilla, or of guaiacum; and consequently, that in no case can we calculate on a certain and radical cure of the pox by means of this rob alone.

2d. That this rob, combined with corrosive sublimate, as Laffecteur appears to prepare it when the patients consulting him have not taken mercury, produces the same effects as mercury administered in the usual way, with this difference, that physicians informed and knowing how to distinguish the various degrees of the disease, the temperaments and age of the patients, select the preparations of mercury accordingly, and never indiscriminately administer corrosive sublimate, which is a very acrid preparation, and which even proves in many instances a real poison, producing hæmoptysis, paralysis, and colic; destroying the tone of the stomach, so that the patients drag on a miserable existence, or

perish in the prime of life, from the violent effects of this remedy. I shall take the liberty to make a short digression on this subject. It is astonishing, that a regular and beneficent government should permit the sale and exhibition of a drug like corrosive sublimate, either alone, or disguised in a decoction or rob. Medical schools, well organized, and furnished with adequate powers by the government, would interdict the use of a remedy, so dangerous in the hands of quacks, and

ould even limit its use in hospitals, without paying any regard to the cheapness of the article. It appears to me strangely inconsistent, and absolutely ridiculous, to make such loud complaints when a poor person is run over in the street, or drowned in the river, while thousands are destroyed by the hands of quacks, or die soon after from the effects of an imprudent and empirical administration of this dangerous remedy,—this species of poison.

Patients affected with gonorrhœa, would save their money and their health more by drinking water with orgeat, or any mucilaginous decoction, than in taking this improved antisyphilitic rob of L'affecteur; they would then escape a great deal of pain, during the disease, and would avoid very certainly hemorrhage from the urethra, or bladder, strictures, suppression of urine, and other diseases in the bladder, which so often follow the use of this improved antisyphilitic rob.

4th. From the information we have acquired respecting the nature, modifications, and complications of syphilitic complaints, and the difference of treatment which they require, there can be no doubt, and I believe every intelligent physician in France will coincide with me in opinion, that these complaints may be cured as

well, and even better, without this antisyphilitic rob, as is done in Germany and England. It is scandalous, and proves how low the profession is degraded: it is scandalous, I say, that physicians and surgeons, who have received a liberal education, should recommend at random a quack medicine, of whose composition they are ignorant, and on whose effects they cannot calculate. In doubtful, complicated, or desperate cases, would it not be far more honourable for the practitioner whose advice is asked, to propose a consultation with some of his professional brethren, and thus obtain the benefit of their experience, rather than dismiss the patient to an ignorant quack, who will too often waste the precious moments in which the patient might have been saved by the care of a skilful and enlightened practitioner?

The natural and artificial vapour baths, have been likewise recommended for the cure, or at least for the palliation, of syphilitic complaints. In many places, particularly in Italy, such a dread of mercury prevails, probably owing in part to the tradition of its pernicious and unhappy effects when it was first introduced, that its use in the hospitals is, or was till lately, forbidden by law: in Naples especially, there are many persons who have been affected, more or less, with syphilis for twenty or thirty years, and dare not employ mercury; or having used it ineffectually, regularly frequent the subterraneous grottoes in the vicinity of the city, and known by the name of *Suditoria di San Germano*, where they are so much relieved that they may live to the next season.

In Hungary and Poland, poor persons afflicted with syphilis seek relief, probably upon the same principle.

by sitting up to the chin in dung, for many days in succession. The Russians and Turks find relief from their vapour baths. In hot climates, the persons are sometimes buried in the scorching sand for syphilis, and likewise for other cutaneous and rheumatic complaints.

There can be no doubt, that vapour baths, administered with discretion, would greatly contribute not only to alleviate syphilitic complaints, but likewise to expedite their cure, and thus assist in eradicating more certainly the inveterate forms of the disease, if applied in a proper manner, every three or four days, during a course of mercury: possibly in this way we might prevent the pernicious effects caused by the mercury remaining in the system, after it has produced its effects on the syphilitic virus.

There are different modes of administering vapour baths. The following is among the most convenient, in those places where baths are not in general use.

The patient, having stripped off his clothes, is to be covered with two or three blankets, and seated on a small wooden bench or stool. Within the covering, and under his feet or the seat, a large pail or wooden vessel is to be placed, filled with boiling water; or else a narrow rather than a wide vessel, containing two or three ounces of alcohol, which is to be lighted by a piece of paper. With the exception of the head, the whole body being loosely covered as directed above, so as to exclude the external air, the patient will soon sweat profusely. His face should be wiped when the sweat is abundant; and from time to time the patient should drink the decoction of guaiacum or sarsaparilla, or white wine whey, or sweetened tea: the blankets should be

occasionally raised gently, so as to prevent the fire from being extinguished, and the patient should move the blankets by raising his arms, so that the heat and vapour may be applied to the whole surface of his body. When the alcohol is consumed, the patient is to be wiped as quickly as possible, and placed in a bed that has been warmed. Either process may be adopted any where, and at all seasons, and will produce all the effects experienced from the famous *Sudatoria di San Germano*, or any other vapour bath.

But, as I have already stated, it is still problematical how far these remedies operate without the aid of mercury. Syphilis is indeed generally more easily cured in warm than in cold climates; and there can be no doubt that guaiacum, sarsaparilla, &c. radically cure many syphilitic complaints in warm climates. The other remedies which are advertised by the quacks and nostrum-mongers, as containing no mercury, and radically curing all venereal complaints, are for the most part, as already stated, preparations of mercury disguised with some decoction or syrup, or else mere inert compositions; and it is fortunate for the patients, when these remedies are harmless.

From the foregoing remarks and observations, it is evident, that all the experiments and enquiries made by the profession, for three centuries, to discover an anti-syphilitic remedy, possessing all the powers of mercury without producing its pernicious and dangerous effects, have proved abortive; and that mercury, when judiciously administered, maintains with us in Europe, the first rank as a sovereign and specific remedy for the cure of syphilis. It is a consoling reflection, that wherever man is exposed to this dreadful scourge, nature

has placed in the opposite scale a simple and powerful remedy, and has endowed man, ever active in the pursuit of perfection, with a genius necessary for its discovery. It seems that reason might supply the more enlightened with a counterpoise for the various moral and physical evils with which man is oppressed by nature.

I will close this long chapter by observing, that it may be considered and established as a general law or principle, that there is no one preparation of mercury, nor any other remedy, which is uniformly adapted to every form of syphilis, and that consequently, there exists no universal antisypilitic remedy. My own experience according with the observations of the most enlightened practitioners in Europe, fully establishes this position, that the different preparations of mercury ought to be adapted to the peculiar temperament or idiosyncrasy of the patient, to the modifications and alterations in the disease in different subjects, and to the different states and varied combinations of syphilis with other diseases; and that then these disorders would almost always be cured, or would rarely fail of yielding to the efforts of the healing art.

CHAPTER XXV.

On the New Syphilitic Disease, which has lately appeared in Canada.

A NEW disease broke out some time ago in Canada, especially in St. Paul's Bay; whence it has been called *Le Mal de la Baye de St. Paul*, (the disease of St. Paul's Bay.) This disease has made a rapid progress, within these few years, among the inhabitants of Canada. The parents transmit it to their children. It is communicated by eating, drinking, &c. If it once enters a family, rarely any one escapes catching it. Some habits seem to absorb the virus, and then sometimes it remains concealed or dormant for years, and then breaks out at last with all the symptoms of the third stage. The patients, often dragging out a miserable existence to old age, lose by degrees, eyes, nose, cheeks, velum pendulum, and the whole basis of the skull, &c. They call it *Mal Anglois*, (the English disease,) because they think the English brought it first amongst them. In several places, however, they give it different names. At St. Paul's Bay the people call it *la Maladie des Eboulements*; in the neighbourhood of Boucherville it is called *Lusta Cruo*; and at Berthier and Sorel, *la Maladie de Chicot*. The name of *Vilain Mal*, *Mauvais Mal*, and *Gros Mal*, are common in many parishes. Where it is of more modern date, they call it *la Maladie Allemande*, (the German disease,) as if it had been brought to them by the German troops; but the name *Mal Anglois* is the most frequently used. There were, in the year 1785,

five thousand eight hundred and one persons discovered to be infected with it: but it was at that time still unknown among all the neighbouring Indian tribes.

It first manifests itself, generally, by little ulcers on the lips, tongue, and inside of the mouth; *rarely in the genitals*. These little ulcers are of a very corrosive nature, and were observed in many children to have nearly destroyed the tongue. They first appear in the form of little pustules, filled with a whitish purulent matter; the poison of which is so infective, that it communicates by eating with the same spoon, by drinking out of the same mug, by smoking tobacco with the same pipe; nay, it is even observed, that it is communicated by linen, cloth, &c.

This poison being absorbed from the ulcers, or as it often happens, originally absorbed without any external symptoms whatever, breaks out afterwards either in large ulcers, or manifests itself by violent nocturnal pains of the bones. The ulcers breaking out in the skin, or mouth, diminish the pain of the bones. These symptoms are often accompanied with buboes under the armpits, in the throat, or groin; which sometimes inflame and suppurate, at other times remain hard and indolent. Some patients feel pains in different parts of the body, which increase during the night time, or when they take violent exercise. This is the second stage of the disorder.

In the third stage, tetters, itching crusts, or ulcers, appear, coming and going in different parts of the body. The bones of the nose, palatum, cranium, clavicula, tibia, arm, and hand, grow carious, or tophi appear in several of these bones. At last pains of the breast, cough, loss of appetite, sight, hearing, smell, and fall-

ing off of the hair, close the scene before death. Sometimes all these symptoms appear at the very beginning of the disease.

The patients drag the disease now and then along for eighteen or nineteen years. One patient, who had this disorder twelve years upon him, besides being affected with many ulcers and tophuses, lost at last, by the same, the calf of one of his legs.

There are some habits which seem not to be susceptible of this disease, at least they are capable of resisting the infection many years: but in general, both sexes, and all ages, are subject to it.

In the second, and especially in the third stage, the disease is highly infectious.

There are many instances where it has been for years in the constitution, without giving any signs of its presence.

A vulgar opinion prevails amongst many, that, like the small pox, it affects the same person but once; but this has been found to be ill-founded by several accurate observations.

There are some persons with whom the disease proved fatal, by bringing on a mortification of the toes. Mr. Bowman observed two cases: one where a little boy lost by the disease both feet; and another, where the leg fell off below the knee. Both patients recovered.

After some days' use of medicines, the symptoms often grow worse, but afterwards disappear.

The bed clothes, as well as other clothes and linen, are to be well washed in soap ley, before they are again made use of.

Coitus is very infecting, and ought to be avoided during the cure.

Children form a large proportion of the infected. There are examples, where Mr. Bowman saw the constitution of some children get the better of the disease, without any medicine; as in the instance of J. Simar, now nineteen years of age, who had the disease when one year old, and never took any medicines for it, nor was suckled by his mother when she took medicines. Some children seemed to be cured of the disease by the medicines which the infected mother had taken formerly, though she herself was not perfectly cured by them.

There is hardly any application that ignorance or superstition, influenced by necessity, could suggest, which had not been used by the Canadians for the cure of this disease.

The dock and burdock roots, sarsaparilla, and spruce, have been generally made use of, and with some appearance of success. Most success, however, has been observed from a decoction of the bark of the branches of the hemlock spruce (*Pinus Canadensis*;) and Mr. Bowman observed afterwards, that it greatly forwarded the cure, though none was found to be cured radically without mercury. The same bark he found answer very well, instead of cinchona, for strengthening the constitution.

Government, by the humane representation from governor Hamilton, thought proper to appoint and send out, in 1786, six surgeons to cure and administer medicines gratis to every person afflicted with this new disorder; in order to eradicate, or at least to mitigate, this evil, with which whole families were infected.

What is most remarkable in this new disease is, 1st. That it seldom affects the genitals; and 2d. That it is

contagious, or at least communicated without immediate contact or coition.

These two curious circumstances appear to me highly interesting, because they seem to elucidate several passages of the earliest writers on syphilis; who all agree that the disease, when it first appeared, and a good while after, had been propagated without immediate contact, or coition; and in none of the authors who wrote the first twenty years after syphilis appeared, do I find any mention made of the genitals being affected.

Every thing being considered, the epidemic and infectious disease in Canada, and the Sibbens (to be described in the next chapter) appear to me to present the same character as Syphilis in the fifteenth century.

CHAPTER XXVI.

On the Infectious Disease, known in Scotland by the name of Siwin or Sibbens.

FROM the most authentic information I have received respecting this disease, I consider it as a variety of syphilis, perfectly similar in the manner it is propagated and in its symptoms, to the disease described in the preceding chapter; and bearing a striking resemblance to syphilis, as it appeared when first introduced into Europe.

It is communicated especially by eating and drinking

out of the same vessels which have been used by infected persons, and consequently the symptoms appear generally first in the mouth and throat, these parts being affected with ulcers, perfectly resembling syphilitic ulcers. But there are instances of the infection being communicated by the mouth or nipples of nurses affected with ulcers in these parts. The inhabitants of the country, are persuaded that the disease is easily transmitted from infected parents to the fœtus in utero, likewise to infants by ulcerated nipples, and even by the milk of an infected nurse, though the nipples are not ulcerated. The ulcers of the mouth and throat when neglected, corrode and destroy very quickly the velum pendulum, the uvula and tonsils; and extending frequently to the neighbouring bones, occasion caries. But the disease does not terminate here, as is commonly observed in other parts of Europe; it extends to the ossa malarum; afterwards the face becomes covered with frightful corrosive ulcers, which extend to the eye-lids. At other times, on different parts of the body, and especially on the face, copper coloured spots appear, which soon change into scaly tetter, or hard warty tubercles, accompanied by severe pains, and a viscous fetid discharge. But what especially characterises this species of syphilis, and identifies it with the syphilitic disease of the fifteenth century, and with the *epian*, or yaws, (see the next chapter,) are, spongy fungous excrescences, which occur on the skin wherever there is a spot, scratch or ulcer; and it is from the resemblance which these excrescences bear to the wild raspberry of the country, named in the Celtic language *Siwin*, that the inhabitants have termed the disease *Siwin*, *Sibben* or *Sibbens*.

Another remarkable circumstance is, that the disease rarely affects the organs of generation, except when through neglect it has made extensive ravages. As those who are infected with the disease, conceal it as long as possible, it frequently proves fatal to the patients.

All the symptoms described above, can be cured by no other means than a complete course of mercury.

Formerly this disease prevailed in Scotland, especially in Ayrshire and the county of Gallaway; but through the attention of well informed and charitable persons, it has become less frequent of late years. At present it is principally observed among the poor and their children; and as this class of people are not attentive to cleanliness, and consequently subject to the itch, superficial observers have taken this disease for the itch, or for a combination of itch and syphilis; but the pathognomonic symptoms described above distinguish it from every other disease, though it is sometimes combined with the itch. A friend of mine, who has frequently seen the sibbens, has assured me, that though the infection is generally communicated in the manner described above, there are frequent instances of the disease being propagated from the genitals, when these parts are affected. Those who are desirous of more accurate information, will find a minute description of the disease, by Dr. Gilchrist, in the *Physical and Literary Essays of Edinburgh*, in 8vo.

The following curious and interesting case, merits insertion in this place. I have now under my care, a patient, who is persuaded that he contracted syphilis by the mouth fifteen or twenty years ago; and though the progress of the disease has been checked by mer-

cury, which he used in the beginning and since, in different forms, he has never been radically cured. Such, in fact, is the state of his system, that mercury administered in any form produces no permanent effect on the disease. The disease, though apparently checked, continues to make slow and regular progress; the uvula and tonsils are nearly destroyed; ulcers successively appear and disappear in the internal fauces, affecting the orifices of the Eustachian tubes, and producing a very disagreeable sensation in the ears and head. But the symptoms of which he complains the most, is a dull gnawing pain behind the velum pendulum, occupying, as he describes it, the whole base of the skull, accompanied at times with other acute pains shooting through the nose, cheeks, ears, and head. When these symptoms are violent, he observes a peculiar redness on the glans and prepuce, with darting pains; without the appearance of any discharge or ulcer. For some days, he is perfectly easy; but afterwards, the foregoing symptoms torment him with renewed force. Apprehensive of contracting a fresh infection, he has had no connection with women for many years; and he does not even venture to kiss the lips, for frequently since the first invasion of the disease, he has experienced, from this simple contact, violent attacks of pain in his throat, &c. Since he has been under my care, whenever I have, at his desire, administered mercury, successively trying different preparations, he has been somewhat relieved for two or three days; but after this short space of time, the symptoms have been evidently aggravated. On this account, I have not given him mercury for some months. I have tried every remedy which offered the least hope of benefit; I have sometimes succeeded in relieving him for

weeks together, but without effecting a radical cure: at present he is nearly in the same condition he was three years ago, when I first saw him.

CHAPTER XXVII.

On the Disease termed Yaws, Epian, or Pian.

THE African name Yaws, (*Framboesia* of nosologists,) designates a disease whose characteristic symptoms consist in a warty eruption on the face, resembling in some respects a raspberry.*

This disease, which appears to be endemic in many parts of Africa, is likewise very common in the West Indies and South America, where it is called Pian or Epian.† It is not so frequent in the United States of America, where it only attacks the negroes.

I find no notice of this disease in any of the old Greek or Latin authors, unless it be the Thymus of the ancients: but I discover a striking resemblance between this disease and the Siwin, and syphilis of the fifteenth century, especially in comparing its symptoms

* I observed in the preceding chapter, that the word Siwin expressed the same thing in the Celtic.

† Some authors consider, for reasons with which I am unacquainted, the Pian as different from the Epian or Yaws. Dr. Moseley is of opinion, that the Yaws is produced by a virus communicated from a bestial connection.

with those which characterised the latter disease on its first appearance in Europe. For this reason I have been induced to treat of the disease in a particular chapter.

We learn, from the testimony of the writers who lived at the period when syphilis first appeared in Europe, that the disease was characterised by warty excrescences on the skin, which particularly disfigured the face, rendering it loathsome by their number, size, and the fetid ichorous discharge. This eruption terminated in a desquamation, and sometimes in horrid ulcers of the skin.

Nothing can bear a stronger resemblance to this eruption, or cutaneous excrescence, than the Yaws. Moreover, the latter has this in common with the syphilis of the fifteenth century, that the eruption gradually extends from the face over the whole body, producing in different parts malignant ulcers; that it attacks the bones, occasioning excruciating pain, exostosis and caries; sometimes the virus is determined to other parts of the body, producing copious puriform or ichorous discharges from the eyes, nose, and ears. This disease is very infectious, and is radically cured in a short time by the use of mercury. I request my readers will consult those authors who wrote at the period when syphilis first appeared, likewise those who wrote during the first ten or twenty years, and then judge for themselves.

This disease, or rather this characteristic symptom of Yaws, Pian, or Epian, is very often, and in the beginning perhaps always local, and then it may be cured by topical applications: this appears to have occasioned an error among many practitioners of my acquaintance.

who have seen this disease in America, and considered it as a local complaint different from syphilis.

The Yaws is communicated by the contact with an infected person, or by flies, which sucking the poison from a deceased person, then lighting on the face of one in health, thus inoculate the virus; the disease appears shortly after, and then I am certain it is merely local. It may then be cured radically by topical means; but if the eruption has continued for some time, if the virus has occasioned ulceration, like the syphilitic virus it may be absorbed into the system, and be deposited or lodged in some part of the body producing particular effects, and forming a constitutional disease.

These hideous eruptions, and these warty excrescences, which were a frequent and general symptom of syphilis, during the first part of the sixteenth century, are no longer observed: they have disappeared in Europe. I have not met with a single instance in my practice.

From these observations it appears, that the virus of *Yaws*, like other poisons or acrimonies which affect the human body, may be absorbed into the system, remain dormant for some time, and then manifest itself by great debility, lowness of spirits, head-ache, blindness, paralysis, dyspepsia, asthma, erratic pains, &c., succeeded by fever of different degrees of violence, accompanied or followed by an eruption on the skin, and other evident symptoms of Yaws. In this state, the disease cannot be radically cured without a course of mercury; though the original and local eruption yields readily to the application of a solution of the sulphate of copper.

The excellent observations on several diseases of hot climates, and especially on the Yaws, lately published

by Dr. Loeffer,* who has frequently seen this disease in Africa and America, confirm me in what I have advanced in this chapter.

What different writers have stated, that the *Yaws* never attacks the same person twice, accords with the opinion entertained by the Scotch, respecting the *Sibbens*, and principally applies to the warty eruption on the skin, which constitutes the most evident symptoms of the disease; for they do not deny the possibility of a person being affected, though this eruption does not appear. On the other hand, as all the other symptoms of *Yaws* may exist repeatedly in the same person without any eruption, it is evident that it ought to be termed the pox. It is not well ascertained, whether the *Yaws* can be communicated without actual contact, but it is fully established that the constitution is frequently affected without any disease on the genital organs.

The endemic of Amboyna and the Moluccas, termed by the Hollanders Amboynense Poken (*variola Amboynensis*,) which Sauvages has improperly placed in the genus scrofula (*scrofula Moluccana*,) appears to be a modification of syphilis, a species of elephantiasis. Independent of coition, an eruption of hard tubercles occurs on the face, arms, legs, and finally over the whole body, which ulcerate and discharge an acrid viscous matter, occasioning pruritus. The ulcers become deep and hollow, with callous and everted edges.

* Beytraege zur arzeneywissenschaft, 1 Theil. Leipsig, 1791. in 8vo.

CHAPTER XXVIII.

On the Elephantiasis, or Black Leprosy.

THIS disease must not be confounded with the monstrous swelling of the legs, likewise termed Elephantiasis, nor with the white leprosy of the Greeks. Sauvages, following the Arabians, has given it the name of black leprosy; but the appellation of Elephantiasis is more common, and appears to be more appropriate, for it renders the skin like that of an elephant, rough, unequal, and hideous, covered with tubercles and fissures. The Greeks termed it *Leontiasis*, probably because the face acquires the ferocious aspect of the lion. The Arabs call it, at present, *Daïl'asad*, (see Asiatic Researches, vol. II. in 4to., printed at Calcutta,) which signifies the same as Elephantiasis, and more frequently *Judham* or *Juzam*. This disease was well known to the Jews; for it is perfectly characterised by the prophet: "Flee the person afflicted with Judham as you would flee a lion."

The joints of the extremities suffer principally towards the last stage of the disease, and drop off. Hillary has termed it the leprosy of the joints; but as, towards the close, the whole body is covered with ulcers, Paul Æginetus has given it the appellation of *universal ulcer*.

This disease was very prevalent in Europe before the appearance of syphilis; but at present we scarcely meet with any cases. This coincidence of circumstances, probably suggested to Mr. Kurtspengel the ingenious

hypothesis, that syphilis originated from a combination of the Elephantiasis, or black leprosy, with the epidemic and pestilential disease which at that period desolated a part of Europe. It is frequent in all hot climates, especially in Egypt and Africa, whence it has probably been carried to the West Indies. It has been known in Indostan by the name of *Khorah*. Accurate and attentive observers have remarked, that the Persian fire of this country, (the syphilis or pox of Europeans,) often terminates in this disease, especially if injudiciously treated. Nevertheless they are of opinion, that the khorah often proceeds from other causes, as unwholesome diet, fish and milk, stimulating medicines, and the use of veal dressed with what they term Balawar.

The first symptoms of this dreadful disease, whether it proceeds from an inveterate pox, or from any other cause, are, atony and general debility, universal redness of the skin, especially of the face, hoarseness, alopecia, fetor of the breath and perspiration, panaris on the fingers and toes. The skin cracks in places, and is covered with tubercles; the hands and feet gradually become entirely covered with corrosive ulcers; the fingers and toes drop off, and the patient dies in a wretched state. The term *Judham*, which the Arabs have given to this disease, expresses the erosion and falling off of the limbs, which occur in the last stages of this disease. This disorder is very contagious; and the inhabitants of Indostan generally believe that it is not less so than the measles, small-pox, or plague: they consider it, likewise, as hereditary for several generations.

Mercury, far from curing, really aggravates the com-

plaint, even when preceeding from syphilis. Repeated mild cathartics, together with the external application of alkaline remedies, sometimes, but not often, cure the disease. The old Brahmin physicians possess an infallible and radical cure for the disease. It is stated to be the white oxide of arsenic.*

I have never seen the disease as it appears in hot climates, or even in Europe; but have seen many cases of obstinate and inveterate lues, accompanied by symptoms more or less allied to this dreadful disease; such as inflammation, redness, and deformity of the eyelids; the falling off of the hair; panaris, with suppuration, and loss of the finger and toe nails; the lower extremities were monstrously swelled, covered with scabby tetter, and accompanied with pain and violent itching, which resisted every preparation of mercury.

CHAPTER XXIX.

On Complicated Syphilitic Complaints.

SYPHILIS is sometimes complicated with other diseases, especially with the following: 1. Scurvy; 2. Herpes; 3. Itch; 4. Leprosy; 5. Elephantiasis; 6. Scrofula; 7. Rheumatism; 8. Gout; 9. Fever, sthenic or asthenic; 10. Certain nervous affections.

* See the Asiatic Researches, vol. II. 8vo. Calcutta.

It is particularly in complicated syphilitic complaints, that the patient requires the aid of a physician endowed with skill and judgment. Such cases often require great boldness and perseverance: sometimes a mixed regimen and plan of treatment is necessary; at other times, it is necessary to palliate, and even to cure radically, the disease combined with syphilis, before any attempts be made to relieve the latter. More frequently still, an alterative plan is required; that is, to administer in the beginning remedies for the more pressing and dangerous disease: and when this is subdued, to administer remedies for the other complaint. I have seen cases where I was obliged to begin with mercury, then to substitute the tonic plan, and afterwards to resume the mercury and to discontinue it again; and this alternately three or four times, before the disease was radically cured.

Some persons have imagined, as I have stated above, that the disease termed by the Scotch, *Sibbens*, was a combination of syphilis with the itch; but I am of opinion, that it ought to be referred to the genus of syphilis, for the symptoms bear a strong affinity to the syphilis of Canada. See chapter 25.

Syphilis, combined with scurvy, is a very dangerous and often fatal disease.

Some well informed physicians are of opinion, that the virulence of syphilis, when it first appeared in Europe, proceeded from this disease being then combined with scurvy, leprosy, &c., which rendered it so obstinate, and so often fatal. When this complication occurs, our efforts must be directed against the scurvy, prescribing the use of vegetable juices and other antiscorbutic remedies, and often a tonic plan, and then admini-

nistering the mercury. The latter, administered before the scurvy is radically cured, is a rank poison. The oxygenated remedies deserve a trial, in this complication of syphilis with scurvy.

Syphilis, combined with leprosy, requires warm baths, the decoction of elm bark with antimonials, the *decoc-tum syphiliticum roborans*. Ph. syph., or, according to the observations of Byornlund and Odhelius, the infusion of the *Ledum palustre*. See Memoirs of the Academy at Stockholm.

Syphilis, combined with elephantiasis, requires the use of the decoction of guaiacum, sassafras, or sarsaparilla, with the sulphuret of antimony. Mercury is highly injurious in these complaints; for elephantiasis and leprosy are uniformly aggravated by this remedy, so as to prove mortal. It must not be employed, notwithstanding the urgency of the syphilitic symptoms, as Schelling judiciously remarks. We have observed in the preceding chapter, that agreeably to the observations of the Brahmin physicians, inveterate syphilis after the repeated use of mercury in hot climates, often degenerates into elephantiasis.

Syphilis, combined with herpes, appears to yield to the remedies recommended in lepra; and the oxygenated remedies administered internally and externally, deserve likewise to be tried under these circumstances.

In syphilis combined with scrofula, mercury is dangerous and even fatal, notwithstanding the assertion of some moderns. Sea bathing, and the internal exhibition of sea-water, are adapted to the cure of scrofula. According to the observations of Fourcroy, the muriate of lime is preferable, given from six grains to a drachm in water, in the twenty-four hours, and a saturated solu-

tion of the same salt as a topical application. In some cases, success has attended the use of cicuta with cinchona, or of the decoction of sarsaparilla and mezereon, with the carbonate of soda. The late Dr. Crawford, of London, found the muriate of barytes very efficacious in many cases of scrofula.

If the patients cannot have easy access to the sea, an artificial salt water, exactly resembling sea-water, may be prepared by dissolving in ten pounds of soft-water nine hundred and twenty grains of the muriate of soda, three hundred and eighty grains of the muriate of magnesia, and forty-five grains of the sulphate of lime.

Syphilis, combined with rheumatic pains, requires powerful sudorifics, as Dover's powder, (see ph: syph.): the preparations of antimony, the tincture of guaiacum, blisters, warm and vapour baths, and the use of the flesh brush, in conjunction with the decoction of the woods, especially of guaiacum, with Huxham's mercurial sulphure of antimony, afford considerable relief in this combination of syphilis with rheumatism.

Great caution is necessary in exhibiting mercury to persons afflicted with syphilis, who are subject to the gout.

The most celebrated practitioners have observed, that persons of either sex, who are attacked with inflammatory or malignant fevers, when affected with gonorrhœa or ulcers of the genitals, very often perish, especially in hospitals, with gangrene of these parts.

The cure of syphilis, combined with what are termed nervous affections, or with great irritability of the system or of the part ulcerated, requires, on the part of the physician, a profound knowledge of the animal economy. Mercury, unless very carefully administered,

proves frequently injurious: this morbid irritability must be corrected by sedatives, or by strengthening baths, before we venture to give the preparations of mercury.

CHAPTER XXX.

On disguised Syphilitic Complaints.

SOME persons, formerly affected with syphilitic complaints, of which they have been apparently cured several months, nay sometimes several years, grow emaciated, begin to cough, and are affected with hectic fever, and other symptoms which accompany a consumption, or phthisis pulmonalis. These complaints are often ascribed to some other cause, and medicines ordered for the most part without any success. Frequently these symptoms proceed from a latent syphilitic taint; at other times they are owing to quack medicines, or the preparations of mercury injudiciously selected, and administered without discretion; especially to the oxygenated muriate of mercury. I have seen several instances, where a hectic fever, with cough, and sometimes even with puriform expectoration, arose from latent syphilitic virus without any other syphilitic symptom in the system. Brambilla relates a case, which appears such a striking instance of the kind, that I shall transcribe it here. "An electuary," he says, "was

prescribed for a consumptive man, who was in a desperate situation. By a mistake of the apothecary, the electuary was given to a venereal patient to rub himself with, and the mercurial ointment, instead of the electuary, was sent to the consumptive patient to take it internally. The consumptive patient, knowing nothing of the mistake, took a quantity of the ointment, about the size of a nutmeg, two or three times a-day, and was effectually cured of his disorder, to the no small surprise of his physician, who learned by chance from the apothecary the mistake that had happened." This mistake was certainly a very happy one for the patient; and though it might be doubted whether the consumption proceeded from a syphilitic cause, it proves very evidently that it yielded to mercury.

This observation is important on two accounts: 1. As showing that there are consumptions which may be cured by mercury: 2. As proving that the gray oxide of mercury, administered internally in the form of ointment, produces the same effect on the system as the other preparations of mercury.

Werlhof states, that he has observed intermittent fevers produced by the syphilitic virus, or complicated with syphilis. Perhaps the fevers which Lyson cured with the muriate of mercury, were of this kind. Stoll likewise mentions the case of a quotidian, which was soon cured by mercury, after the cinchona had failed. I believe, however, that it would be wrong to infer that such fevers partook of the syphilitic character, because they yielded to mercury: for practitioners of information and of attentive observation in England, have remarked, that very obstinate intermittents, which resisted the cinchona, yielded readily to the muriate of mercury

administered for a few days, even when there was not the slightest reason to suspect syphilis, and this is confirmed by my own observation. From well authenticated observations made in hot climates by several well informed physicians, the effects of mercury in these cases, appear to be owing to its powerful action on the biliary system. But the mercury must not be administered in conjunction with cinchona, or any other astringent, as many practitioners have improperly recommended: for as formerly explained, these remedies, administered together, mutually destroy each other.

Obstinate sore throats, violent headaches, erratic pains in different parts of the body, painful swellings of the joints and bones, which are frequently supposed to be gouty or rheumatic, often proceed from a syphilitic taint. But they are likewise often the effects of mercury imprudently administered, or to the neglect and carelessness of the patient, who during a course of mercury, has been exposed to cold and wet. As it is of great importance in practice, to discover the true cause of these complaints, without which we cannot expect to obtain a radical cure, we should not be in a hurry to prescribe; but we must previously examine, even repeatedly if necessary, the patient on his former mode of living, the diseases he has had, and the remedies employed, and the regimen adopted.

By taking these precautions, I have frequently discovered the hidden cause of these complaints, which had not been suspected. I have sometimes found, that it was a gonorrhœa checked or suppressed by some quack medicine; at others, a shanker hastily cured by topical applications, sometimes many years before, so that there was not the slightest suspicion that the pre-

sent disorder could have any relation to the former complaints. I have seen other instances where these disorders followed the administration of remedies which quacks vend to the credulous, as safe and certain specifics for the cure of syphilis in all its forms. At other times, these complaints are owing to the imprudent use of acrid preparations of mercury, as the corrosive sublimate, or to a proper course being improperly pursued, or abandoned through impatience or other causes before a radical cure is effected.

These uncured poxes, these disguised or complicated syphilitic complaints, especially in constitutions already broken, either by the virus or by the effects of quack medicines, (especially if, as often happens, there is a gouty diathesis,) are very difficult of cure, and sometimes even incurable.

In different parts of this work, I have already explained the cause and treatment of the erratic and sometimes alternating pains, affecting the genital organs, and the surrounding parts.

As regards ulcers of a doubtful character, see chapters 6, 12, and 16.

In most disguised syphilitic complaints, the oxygenated medicines deserve to be tried, as a new resource in the healing art; or perhaps, according to circumstances, the chalybeate springs, or the preparations of iron, in order to render the disease apparent.

CHAPTER XXXI.

*Why certain Syphilitic Complaints do not yield
to Mercury.*

ALTHOUGH there are few practitioners who have not seen frequent instances of syphilis which resist mercury, and scarce any writer of note who has mentioned them; nevertheless, to the best of my knowledge, no one has made any minute or exact inquiries on this subject, or sufficiently explained the causes of this phenomenon, and much less indicated the means of curing these disorders: hence I have been induced to examine the subject with attention, and to offer the result of my inquiries.

As there are cases of intermittent fever, which appear to resist the power of cinchona, so there are cases of syphilis which appear to resist, and actually do resist, the action of mercury. We observe sometimes particularly ulcers of the genitals and throat, eruptions on the skin, condylomata, and other excrescences, exostosis, &c. in different parts of the body, which elude the action of mercury, even when administered with the greatest skill: it is often difficult to ascertain whence this real or apparent incurability proceeds. The following appear to be the principal causes.

1. The nature and quality of the mercurial salts and oxides; in other words, the careless or incorrect mode of preparing them, or the improper form in which they are administered: the combination of these preparations

with other articles which diminish or completely destroy their effects: finally, the dose and manner of administering them.

2. The course of treatment adopted by the patient, and the time it has been continued.

3. The usual or the actual habit of the patient, the age and sex.

4. The state of health, the diseases, syphilitic or others, which the patient has laboured under, or with which he is actually affected.

5. The regimen he has pursued during or after a mercurial course.

6. The errors committed by the patient, and those by the practitioner, during the use of mercury.

7. The real nature of the preceding and of the present complaint: 1. Whether the disease is really syphilitic, and whether it is combined with scurvy, scrofula, or any other disorder; 2. Whether the nature of the disease was doubtful in the beginning, or whether it has become so since, and is consequently so at present.

Since the introduction of frictions with mercurial ointment, which was the first, and for a long time the only method employed for the cure of syphilis, many other preparations of mercury have been discovered and tried both internally and externally, as well for the cure of the syphilitic complaints which did not yield to the frictions, as with the view of effecting the cure in a more expeditious and less inconvenient manner. I shall wave all reflections respecting the preference any of these methods or preparations may deserve. I have fully discussed in the preceding chapters, the nature of the different preparations of mercury, and the more or less

advantageous mode of administering them. I shall therefore confine myself, at present, to examine why mercury, administered in frictions, or in any other way, sometimes fails of curing syphilis.

I have seen many persons affected with inveterate blennorrhœas, ulcers of the nose, throat, or genitals, eruptions on the skin, warty or condylomatous excrescences, periostoses, exostoses, and caries, which seemed obstinately to resist the power of mercury, though its use had been continued for a great length of time.

After a very careful examination, I have found, that we must often look for the causes of this difficulty in the remedy itself, or in the manner of applying it. I have observed, 1. That the mercurial salt or oxide which had been employed, was improperly prepared, or injudiciously administered in conjunction with other articles, which counteracted or destroyed the power of mercury. 2. That it had not been exhibited in sufficient quantity, or continued long enough. 3. That it had been given in too large quantities, or improperly, and had excited salivation, profuse sweats, and diarrhœa, without radically destroying the virus.

The essential circumstance in the treatment of syphilis with mercury, being to introduce into the system the quantity necessary to destroy completely the virus, the best means of effecting this appears to be to introduce the greatest quantity possible of a preparation appropriate and well prepared, without exciting too much (or as little as possible) the different excretions. Whence it is evident, that mercurial remedies unskilfully or negligently prepared, or improperly selected, in regard to the constitution of the patient and the state of the

disease; or that mercurial salts or oxides, mixed with articles incapable of suspending the mercury, cannot produce the desired effect. The oxide of mercury, prepared with mucilage employed in mixture, and the nitrate of mercury combined with alcohol in Belet's syrup, are striking instances; the mercury remains suspended in the mucilage, or in the alcohol, only for a very short time; the oxide of mercury, being exposed through negligence to the rays of the sun, the greater part is soon reduced to the metallic state, and falls to the bottom of the vessel. The same occurs when the mercury has not been triturated with the different articles a sufficient length of time, or with sufficient care, to convert it into a perfect oxide; its effects must then be very uncertain. When a mercurial salt or oxide is prescribed in a pill or bolus, &c., and the apothecary has not been careful in the composition, one pill may contain three grains or more of mercury; another may contain but one grain, or perhaps not so much. Hence the latter will produce no effect, and the former will occasion griping, diarrhœa, and other violent effects.

The same inconvenience occurs, when we administer the combinations in which the oxide or salt of mercury is disposed to precipitate; then frequently the patient takes scarcely any mercury at first, and a great deal, and even too much at a time, towards the end.

The same uncertainty occurs respecting the quantity of mercury introduced into the system, if the frictions are performed violently, or in a careless manner; this is often the case in women. They perform the first five or six frictions very exactly; but they soon become tired, and they perform them carelessly as soon as the dis-

ease disappears. This inconvenience is experienced, when the frictions are performed with the naked hand by another person. Besides, if the ointment is acrid, rancid, or if turpentine enters into the composition, it irritates the skin, produces a degree of erysipelatous inflammation, pustules, &c., and prevents the absorption of the mercury, or the continuance of the frictions. In all these cases, it often appears surprising that the patient is not sensible of any relief, notwithstanding the length of treatment and the quantity of mercury employed; but on a stricter scrutiny it will be found, that in all this time but little mercury has entered the system.

The same occurs, when mercury is exhibited internally, and through inattention, or the improper selection of the mercurial preparation, colics and diarrhœa are excited.

As we may be deceived in supposing that a sufficient quantity of mercury has been given, because large doses have been exhibited, for a longer time, and yet only a small quantity has entered the system; we may fall into the opposite error, by overcharging the system with an excessive quantity of the mildest preparation, or of an acrid salt or oxide of mercury, not suited to the patient, and which produce violent effects, profuse ptyalism, vomiting of blood, nervous complaints, &c.

It may be observed, that a preparation of mercury is ill adapted to its object, when it does not enter the system, or when, having been conveyed into the blood, it runs off by salivation, sweats, and urine, without producing the desired effect on the virus; and it is erroneous to believe, that by salivation, and immoderate

sweats, all the virus is evacuated, and consequently the disease radically cured; for it is precisely the reverse. It is true that, when the patient is salivated, the symptoms frequently disappear; but it is a mistake to suppose, that he is therefore cured. Often, at the end of a few months, or even weeks, the syphilitic complaints return with increased violence. I allow, that slight syphilitic complaints are occasionally cured radically in this way, but I maintain, from repeated observations, that salivation of itself has no influence in the cure of syphilis.

Salivation is a sure sign that the mercury has entered, and is acting on the system, but not that the syphilitic virus and its effects on the body, are destroyed, or that the disease is radically cured; on the contrary, a profuse and continued salivation always renders the cure doubtful.

I must remark that, to be fully satisfied that the patients are cured, every practitioner who is not indifferent about the remedies he administers, ought to employ only such mercurial compositions as are prepared by himself or under his inspection, or by some person in whose accuracy and honesty he can confide. The frequent inconveniences I have experienced, has rendered me very particular and even scrupulously exact in this respect.

Acrid preparations should never be exhibited, when the cure can be effected by milder means. This perhaps is of still greater importance, when there is occasion to administer mercury to persons who are delicate, irritable, nervous, or subject to hæmoptysis, colics, &c. The dreadful effects produced by corrosive sublimate, turpeth mineral, &c. which I have frequently witnessed, induce me particularly to enforce this precept. The

uniform effects of these acrid remedies, especially in persons of a delicate habit, are, pains in the stomach and bowels, loss of appetite, violent gripings, diarrhœa, and sometimes dangerous colics; in other instances they occasion hæmoptysis, convulsions, nervous fevers, and other complaints, more alarming than those they were intended to remove; or they excite profuse sweats, salivation, or corrosive ulcers in the mouth, which frequently prevent these remedies being continued long enough to effect the cure. If we decide on administering acrid and strong preparations, as may occasionally be deemed necessary, especially in syphilitic complaints of the skin and bones, we should inquire into the constitution of the patient; and if this does not forbid, we must begin with very small doses, so that we may avoid the accidents alluded to, and particularly the diarrhœa: for when once this occurs, the mercury, instead of entering the system, passes off by stool, and torments the patient without procuring any relief.

The cure of syphilis is still more uncertain, when mercury is administered combined with articles which change its nature, or entirely destroy its properties; for example, if mixed with sulphur, with the sulphur of antimony, or with the hydrosulphureted oxide of antimony: the *Æthiops mineral*, *cinnabar*, *Æthiops antimonialis*, *Plummer's pills*, and powder, &c., are all uncertain remedies. The same occurs in a more striking manner, when mercurials are prescribed in combination with astringents, or given at the same time, though separately. I have seen corrosive sublimate, and turpeth mineral, administered in very large doses, and for a length of time, in conjunction with a decoction of cinchona; and it was matter of astonishment, that the

venereal complaints were not alleviated, but were rendered evidently worse. The fact has been adduced to prove, that these acrid salts were not so injurious to the human system as some theorists have endeavoured to persuade practitioners of experience. I have known well informed physicians, astonished at what they observed, of opinion that the peculiar constitution of the patient was the sole cause that these acrid salts and oxides of mercury, thus imprudently administered in large doses, and for a length of time, occasioned no unfortunate consequences. This astonishment ceases when we are informed, that cinchona, tea, and astringents in general, exhibited in infusion or decoction with the preparations of mercury, decompose the latter, and render them perfectly inert. Any one would be convinced of the truth of what I have advanced, if he swallowed a large dose of corrosive sublimate, and then took of a strong decoction of cinchona; the poison would remain inert in the stomach.

Hence the necessity of paying great attention to the choice, dose, and administration of mercurial preparations; of applying, in every case, the remedy which appears to agree best with the temperament and condition of the patient; of never employing absurd or uncertain compositions, and especially carefully avoiding such remedies as might counteract or destroy the power of mercury. We must never persist in the use or dose of a particular preparation which produces no benefit, or which occasions bad effects on the system; and never imitate the quacks, whose knowledge is confined to some nostrum, which they administer indiscriminately to all their patients, and who impudently pronounce that their patients are cured as soon as the symptoms have

disappeared; a declaration which young people, and women, are disposed to believe implicitly, the more readily as they cannot bear long confinement or restraint. And for one patient that they occasionally cure, they ruin the constitution of many, and commonly render the disease more obstinate. In fact, the virus remains dormant for weeks, months, and even years, but then breaks out with greater violence, and occasions symptoms the nature of which the most discerning practitioner can scarcely discover, especially in females, and which frequently baffle all the efforts of the healing art; for the longer syphilitic complaints have continued, and the oftener they have been patched, the more they resist the specific action of mercury.

The third and fourth causes which often prevent mercury from curing syphilis, are connected with the constitution, or peculiar disposition of the patient. In certain constitutions, nature co-operates readily with the mercury, whilst in others it acts slowly, and with difficulty. Sometimes the daily application of electricity, baths, sudorifics, or the exhibition of more powerful preparations, increasing the dose, or combining the internal use with mercurial frictions or baths, are necessary to render it active; at other times opium must be administered with the mercury. Strong and plethoric constitutions must be reduced by bleeding, purging, and low diet; whilst weak and irritable habits require tonic remedies and a phlogistic diet, so as to render a mercurial course safe. Pregnant women and children affected with syphilis, do not bear mercury without nice attention. Some patients cannot bear mercurial frictions, on account of the peculiar irritability of the skin, or the disagreeable effects produced on the system, as colics,

diarrhœa, &c.; whilst the same patients bear much better the internal use of mercurial preparations, and vice versa.

Finally, some persons are more disagreeably affected by one preparation of mercury, administered internally, than by another. Mercury, uncombined, sets best on some stomachs; while others require it to be combined with opium, or some agreeable aromatic, &c. Some patients, especially among women, or among those who have taken large quantities of mercury for former syphilitic complaints, whose constitution has been rendered so irritable, that after having again administered to them, internally, a few grains of a mercurial oxide or salt, or a few frictions, are affected with violent pains, resembling rheumatism, with nervous fevers, anxiety, restlessness, colics, spasms, headaches, colliquative sweats, &c., or are very easily salivated. In such constitutions, we must be particularly attentive in ascertaining the preparation, and the dose of mercury, which agree best with the patient.

It is sometimes advantageous, and even necessary, in such cases, to administer medicines which will allay irritation, tepid baths, the decoction of sarsaparilla, with small doses of the carbonate of soda, opium, before we commence or continue the exhibition of mercury. In other cases, the patient must be strengthened by tonic medicines, and nourishing diet. In these cases, and more particularly in certain ulcers, or where the bones are affected by inveterate and confirmed syphilis, we must suspend the further use of mercury, and administer either the decoction of guaiacum, of sarsaparilla, or the carbonate of soda, or else tonic remedies and diet. By the use of these remedies, in proportion

as the patient recovers his strength, the syphilitic virus, which remained dormant, appears with increased violence, and all the symptoms of syphilis return. In this state, the mercury must be resumed, and continued as long as the condition of the patient will permit, and then the preceding remedies and regimen; alternating in this manner as often as is necessary, till the virus is completely eradicated, the carious bone exfoliated, and the patient perfectly cured.

If these precautions are neglected, many patients of this description will certainly be liable to suffer as long as they live, without ever being able to obtain a radical cure; especially when the mercury, having been imprudently administered in very large doses, has excited in delicate and irritable habits the seeds of the gout, or tumours, or very painful exostosis in different parts of the body, particularly in the joints of the knee, shoulder and clavicle, &c. Then the mercury, though it occasionally alleviates the symptoms for a time, more frequently aggravates the disease, and sometimes renders it incurable. In such cases, great benefit is often obtained from bathing in sulphur springs, and the internal use of alkaline waters, supersaturated with carbonic acid. Vapour and shower baths often prove particularly beneficial.

With respect to the diet to be adopted during a course of mercury, I shall make one remark, to which little attention is generally paid. Most authors and practitioners confine their syphilitic patients under a course of mercury, without any distinction, to a very low diet, both in eating and in drinking. This rule is very improper, when rendered general, and applied to every case. Such a diet is often very suitable for strong and vigo-

rous constitutions; but for weak, delicate and irritable habits, it is highly improper. The latter requires a nourishing diet and the moderate use of wine; otherwise the mercury will produce no effects on the virus, though very disagreeable ones on the constitution. Syphilitic complaints often subside under such a strict regimen, and even disappear; so that the patient imagines himself cured; but some weeks or months after he has returned to his usual mode of living, they torment him afresh, and oblige him to go through another course.

The errors committed by the patients and by the physicians. The patients often render their complaints obstinate and complicated, by attempting to cure themselves, or by applying to quacks, or persons unskilful in the art of healing. They frequently, also, injure themselves by neglect of diet, or by not making use of the medicines in the manner prescribed, or by not continuing the same long enough, but leaving off as soon as the symptoms disappear; by exposing themselves imprudently to the cold and damp atmosphere, especially at night; or when they grow impatient and inconstant, going from one physician to another, or making use for some days or weeks of one medicine, and then of another.

On the other hand, syphilitic complaints are often rendered obstinate by the ignorance and unskilful conduct of certain practitioners, who, from negligence, the want of information and practical knowledge, or from indecision, or sometimes, perhaps, from less honourable motives, adopt an improper plan, or do not enforce the necessary treatment and directions; or finally, who neglect to point out the evil consequences which will

result to the patients from not conforming to these directions. I have known practitioners mistake blennorrhagia, blennorrhœa, diseases of the prostate, different ulcers of the mouth, tongue, throat, and genitals, in both sexes, pains resembling gout or rheumatism, for syphilitic complaints; finally, scrofula, scurvy, leprosy, &c., which had no appearance of syphilis. All these circumstances, alone or combined, render the use of mercury uncertain and inefficacious.

The nature of the disease itself, complicated, or perhaps misunderstood, is a frequent cause why certain syphilitic complaints resist mercury. I have given a remarkable instance, chapter 26, p. 457. Many important circumstances are to be considered: 1. The disease is really syphilitic, and then more frequently it only apparently resists the mercury, because this remedy has not entered the system in sufficient quantity, or in a manner capable of destroying the syphilitic virus; or because the mercurial preparation employed is not adapted to the patient's constitution. Moreover, in the disease itself we seek for the cause why mercury does not cure, when the patient, from having previously taken mercury in excessive doses, or imprudently, can scarcely bear a few grains, or a few frictions, without being salivated. If, in this case, the mercury is omitted, the patient is not freed of his disease; and if it is continued, it will certainly occasion a distressing ptyalism, which sometimes lasts for weeks or months, exposing the patient to dangerous consequences, and often leaving the principal disease uncured.

2. We are often disappointed in our attempts with mercury, because we are mistaken in the nature of the disease, considering as syphilitic, diseases which, 1st.

Never partook of the syphilitic character, as a great number of what are termed claps, shankers, warts, and other excrescences on the genitals, ulcers, erratic pains, diseases of the skin, &c.; or, 2d. Where syphilis is complicated with other diseases, as lepra, elephantiasis, herpes, scurvy, scrofula, gout, &c. In some of these cases, mercury produces no effect; in others, it occasions distressing or fatal effects:—Or,

3. These complaints, though originally produced by the syphilitic virus, have changed their character, and degenerated, either by the lapse of time, the regimen, or the effects of mercury, or other causes, into diseases essentially different; for which mercury, far from being salutary, proves an actual poison. Of this description often are exostoses, and caries of the bones. In these instances the syphilitic virus is often completely destroyed by the mercury, but the caries remains; and we shall be deceived, if we expect to expedite or produce the cure by the further use of mercury. No radical cure is to be expected, till the carious portion has exfoliated; and the process is the work of nature, often slow in her operations. In endeavouring to expedite it by mercury, we shall often hurry the patient to his grave. In ulcers this change is particularly observable. They become stationary under the use of mercury, and then painful and sore to the touch; the matter becomes acrimonious and corrosive; in a word the whole system appears to be superoxygenated. In other cases, the reverse is observed: the patient is affected with extreme debility, and universal cachexy; his gums easily bleed; his breath and mouth are offensive; the ulcers are livid, foul, and flabby; the patient has neither life nor spirits; we might pronounce that the whole system was

hydrogenated. These ulcers are commonly distinguished into two kinds; the former are termed scrofulous, the latter scorbutic, but these appellations are rather figurative than expressive of the real character of these ulcers; and while in London I saw, in consultation with Mr. Hunter, many persons afflicted with ulcers which he termed scrofulous, which possessed no other symptom of scrofula than that morbid irritability which is often observed in scrofulous complaints.

In either case, mercury acts as a poison: it increases the disease, and if the use is persisted on, gangrene and death are often the fatal consequences of this imprudence. In the first class, recourse must be had to bathing in sulphur springs, to alkaline mineral waters, to astringents, and especially the cinchona, to the decoc-tum syph. roborans, ph: syph., to animal diet and sea bathing: in the second to vegetable acids, antiscorbutic medicines and diet, (perhaps oxygenated remedies,) wine, country air, and finally to the acidulous and chalybeate mineral waters, and other tonics. For the treatment of diseases so opposite in their nature and character, I refer the reader to the chapters on ulcers and complicated syphilitic complaints. I have there expressed my ideas as fully as the obscurity of the subject and the want of information would permit.

CHAPTER XXXII.

On the Diseases produced by Mercury, termed Mercurial Diseases, and on their treatment.

THE injurious effects of mercury on the human system have been observed at all times in the mines whence the metal is extracted, and in the different work-shops and manufactories where it is employed: but more especially since several of the chemical preparations of this metal have been introduced into the practice of medicine, for the cure of syphilis. Many ancient writers, since Vigo, mention the circumstance; and there is not a practitioner of the present day, who has not occasion to observe the injurious and even dangerous effects of this metal; especially when administered by the ignorant, imprudently and without the necessary precautions.

Though the subject is highly interesting, I know of no writer who has professedly examined, or written on it. This must be my apology, if the following inquiries are not as perfect as could be desired.

I shall not notice the injurious effects of some particular preparations, for I have fully discussed this subject in a former chapter. I shall consider principally the diseases which mercury, especially the oxides and salts of this metal, in general, seem to produce on the human system, whether these effects be owing to the active remedies themselves, or to their injudicious selection or

improper administration, or finally to the want of the proper precautions during their use.

We have already considered the nature and action of the preparations of mercury in chapters 19, 20, 21, 23. We have shown that mercury appears to act on the oxygen in the form of an oxide or salt: for fluid metallic mercury, administered internally or externally, appears to exert no action on the human system, since received into the stomach, it passes through the alimentary canal, without being absorbed by the lacteals.

We have likewise demonstrated that mercury, triturated with lard, gum, &c., was not, as was long supposed, in a state of simple division, but in a real state of oxidation. We have explained the different theories respecting the action of mercury on the syphilitic virus. At present, we must consider the action of mercury on the human system, in a double point of view: 1. Respecting its action and effect on the human system by reason of the oxygen contained: 2. On account of its action as mercury, infinitely divided, or otherwise changed, either by the different acids with which it is combined, or by the new combinations it forms in the human system. I stated in chapter 23, that among the different theories offered to the public, that which I presented in the first edition of this work, appeared to me the most plausible; to wit, that the salts and oxides of mercury appear to act by uniting with the syphilitic virus, or with the fluids with which the virus is blended in the system, which it neutralized or altered, so that the nature of the virus was completely changed or destroyed, and that consequently the action and irritation occasioned by the virus must cease *ipso facto*. It appears, moreover, that while this is going on, there is a real decomposition

of the mercurial salt or oxide administered, and that the oxygen leaves the mercury with which it was combined. But the action of the mercury does not cease here, for on continuing its use we observe, that the oxygen on one hand, and the mercury, as mercury, on the other hand, in the act of quitting, or after it has quitted the oxygen, produces in the animal economy particular changes and effects, of which I shall now give some account.

Oxygen introduced into the living system, through the medium of the lungs, and especially of the stomach, with substances from which it is easily disengaged, increases the action of the heart and arteries, renders the blood of a brighter red, and occasions in the albuminous principle, a disposition to thicken or coagulate; instead of impairing digestion, of exhausting or weakening the system, (the uniform effects of mercurial preparations,) it increases the appetite, and appears to impart an additional warmth and vigour to the system: ulcers, and other syphilitic symptoms, cicatrize and disappear sometimes, during this operation of oxygenated remedies. These are the effects of oxygen, not in combination with mercury, on the blood, and the general system.* I shall now proceed to the consideration

* The oxygenated remedies sometimes affect the salivary glands, in the same manner as the preparations of mercury. I have a striking example before me. I administered to a young man the superoxygenated muriate of potass. I began with twenty grains a-day; and for eighteen days I gave him fifty grains in the twenty-four hours. At first he perceived no other effects than considerable sweats during the night, and a white tongue; but at the end of four days, an ulcer appeared on the gums, exactly resembling those commonly produced by mercury; by continuing the remedy two days longer, the ulcer spread and became very painful; the parotid on that side, and likewise the tonsils and submaxillary glands

of the effects produced by mercury pure and simple, or combined with oxygen, in the preparations of mercury.

The vapours or exhalations of this mineral in the mines, likewise in the shops and chemical laboratories, powerfully affect the brain and nerves, and produce asphyxia, colics, tremors, and even paralysis of the limbs, render the body languid and inactive, and finally destroy the intellectual faculties, rendering them dull and stupid. I have seen many melancholy instances of this complaint among the water-gilders, who employ gold amalgamated with mercury, and volatilize the latter by the aid of fire.

Professor Fourcroy has presented* a striking example of the complaints induced by mercury, applied in this manner, in the history of two gilders on carved work, a man and his wife, which deserves a place here.

“ This man was very much engaged in Paris; he was gilding from morning to night, in a tolerably large room, but with a low ceiling, in which he, his wife, and children slept. Having taken very little precaution to guard against the mercurial vapours, he was affected with several ulcers in his mouth: at this period his breath was fetid: he could neither speak nor swallow without distressing pain. Similar accidents, cured by leaving off his work, and by the use of appropriate remedies, had occurred three or four times in succession,

swelled, and rendered deglutition very difficult. These symptoms were accompanied by a very copious and perfect salivation, which continued day and night, for four or five days in succession, though the remedy was omitted the moment the ptyalism appeared.

* *Essai sur les Maladies des Artisans*, traduit du Latin de Ramazzini avec des notes, p. 42, &c.

without any other symptoms; but to this disease was soon added a violent and universal tremor, which first affected his hands, and afterwards his whole body: he was confined to a sofa without being able to walk; his condition was truly pitiable; agitated by continual convulsions, he could not speak, and he could not move his hand to his mouth, without striking himself: they were obliged to feed him, his deglutition was convulsive, and in this act he was often near being suffocated. In this miserable condition, he applied to a quack, who rubbed his legs with some ointment, and directed him to be bathed in strong wine, in which aromatic plants had been infused, and prescribed about a scruple of a red powder, to be taken in an apple morning and evening. These secret remedies, and with whose indication we are therefore unacquainted, had an extraordinary effect: his tremors abated, his legs and thighs became prodigiously swollen, and were covered with numerous vesications, which were opened with a needle; they discharged a quantity of turbid serum, which was kept in pots by the directions of the empiric. After some time an abscess formed, in which the globules of mercury were very evident. This circumstance ought to occasion no surprise, for this semimetal has been observed more than once in the brain, intestines, lungs, and bones of persons, who have died after taking mercury. After five or six months of a similar treatment, the patient was much better, his tremors being much diminished, and almost entirely removed; he thought himself cured: and, notwithstanding the advice of his physician, who directed him to continue these remedies for two or three months, so as to insure a perfect cure, he neglected himself. By degrees he tried to walk

with two canes, and he was strong enough to venture abroad, and to walk in the streets; he acquired strength by the exercise, but he was affected by an extraordinary sensibility: the noise of a horse or carriage, made him start to such a degree, that several times he would have been crushed, if he had not made for a wall or house. He was then obliged to stop, for fear of falling: he could not express the disagreeable sensation which the noise occasioned. At length he returned to his trade, and, notwithstanding the precautions he took, his tremors increased, and fixed in his hands. He was in the habit of intoxication: in this state, he could hold his glass without spilling, which he could not do before he had drunken: he remarked to me, that he had made the same observation on several of his fellow-craft, who were in the same condition. The care he took to work but very little, and to disperse the vapours of mercury by a current of air, exempted him from the severe complaints with which he had suffered; he experienced only a tremor in his hands, and a dreadful stammering (*psellinus metallicus* of Sauvage,) which resisted electricity recommended by De Haen, who found it successful in such cases. This gilder lived for three or four years, without any other complaint, and at length died of a fractured arm, the bone being broken in three different places. This arm had been affected with rheumatism, for which he wore an issue several years.

His wife laboured under nearly the same symptoms, but much less severe in the beginning. She was particularly affected with ptyalism, which wasted her to a skeleton. In the end, this poor woman became asthmatic; the paroxysms of the disease were at first with

long intermissions, but they gradually became more frequent, she had a continual rattling in her throat, but without cough or expectoration: towards the close of the disease, which continued the same for eighteen years, she could not walk nor bend her body, for fear of suffocation; confined to the sofa for more than a year, the asthmatic symptoms became more violent: she was finally delivered of all her complaints by the hand of death—welcome to her, but awful to the surviving spectators.

Fluid metallic mercury, taken in large quantities, as stated above, appears not to affect the stomach and bowels; but passes through the intestinal tube unchanged. There is, however, a prevailing opinion in Germany, that mercury boiled in water, imparts an anthelmintic property to the latter fluid; and the fact I quoted in another part of this work, of a mangy dog, who was cured by drinking a decoction of mercury, without the administration of any other remedy, seems to afford some ground for this opinion, but I think it requires the confirmation of more exact and repeated experiments.

Mercury introduced into the animal economy, in the form of an oxide or salt, produces several effects, similar to those produced by oxygen, but it produces some which are very different. In the stomach and bowels, it often excites cardialgia, dyspepsia, and loss of appetite, colic, and diarrhœa. Conveyed into the circulating fluids, like other oxygenated remedies, it renders the tongue white; it disposes the albumen to coagulate, or to form what is termed the inflammatory coat on the surface of the blood drawn from the body, and excites many other symptom of increased irritability. But on the other

hand, continued for some time, it produces effects manifestly different from those produced by oxygenated remedies. Such are often a sudden and violent increase in the secretion of saliva, and a change of this mild and inodorous fluid into an acrid, corrosive, and fetid fluid, fetid breath, tumid gums, painful and spreading ulcers of the mouth and tongue. The teeth grow black and loose; they fall out, and are followed by the destruction of the palatine and maxillary bones. These symptoms are generally accompanied by more or less languor, debility, and emaciation of the system; and sometimes terminate in a torpor, or a general cachectic or scorbutic state, and sometimes in catalepsy. The ulcers, and other symptoms of syphilis, local or universal, assume however during the action of mercury, a more benignant aspect. The corrosive action, and all the pernicious effects of the virus abate, and finally cease; the ulcers cicatrize, and all the symptoms of syphilis entirely disappear. These effects generally occur, and if the mercury has been properly administered, the patients, with scarce an exception, will be radically cured. But where the treatment has been imprudently conducted, and without a strict attention to the condition of the patient, or where it has been continued beyond a certain period, it excites fever, or a general morbid irritability of the nervous system; and the syphilitic ulcers, instead of cicatrizing, degenerate into ulcers of a different character, which have sometimes received the appellation of scrofulous ulcers, at others of phagedenic or corrosive ulcers; but they are more aptly designated by the name of erythematic mercurial ulcers.

Mercurial preparations moreover excite, and most frequently when the patient has been exposed to severe cold or night air, headache, swelling of the face, throat,

and the whole inside of the mouth; sometimes fevers, with violent local inflammation, followed by mortification of the parts, at other times spasms or tetanus, partial or universal, violent pains in the muscles, tendons, and joints, resembling rheumatic or arthritic pains, mania, paralysis, and even sometimes apoplexy and death.

Sometimes the mercury produces very great irritation in certain parts, soon followed by mortification. We have already stated an example, where the imprudent use of mercury occasioned gangrene in the throat; and another where the oxide of mercury with mucilage, applied to an ulcerated bubo, produced the next day a mortification in the groin.

In some constitutions, syphilitic ulcers in the throat or on the genitals, instead of healing during the use of mercury, remain stationary; soon after they degenerate, the slightest touch excites pain, the matter discharged assumes an acrid and corrosive quality; the ulcers spread in all directions, forming sometimes inequalities and excavations, as if worm eaten; the whole system suffers, the pulse becomes irregular and accelerated, the patient loses his sleep and cannot rest, he is exhausted by nocturnal sweats, and the slightest circumstance irritates and renders him impatient.

Finally, in other instances, the constitution appears to suffer, during the use of mercury, a total change different from the preceding cases. The patient grows daily weaker; his countenance changes; his complexion becomes saturnine; the ulcers instead of healing, become flaccid and livid, and bleed readily. These ulcers have been termed *putrid*, *scorbutic*, and sometimes *phagedenic*, they might be called with greater propriety

atonic mercurial ulcers. In this state the whole body appears to be affected with a species of cachexy, which has been not unaptly compared to scurvy, and has received the appellation of scorbutic. It is a state of real debility and prostration of strength, with an apparent decomposition of the fluids and solids.

Mercurial ulcers of the mouth, or gums, are easily distinguished from syphilitic ulcers, by the following circumstances: 1st. They are painful when touched, and are even always painful; syphilitic ulcers on the contrary are generally indolent. 2d. They are situate most frequently on the tongue, lips, and gums, and particularly behind the last molar tooth: syphilitic ulcers on the contrary, are commonly observed on the tonsils and uvula. 3d. They are not covered with a thick white lardaceous coat like syphilitic ulcers; but they are rather red, and bleed readily on being slightly rubbed. 4th. They grow worse under the use of mercury, and become even fatal, if this remedy is continued; and they readily yield, on the contrary, to the local application of borax and astringents.

In many instances, the mercury, though administered secundum artem, appears to exert no action on the patient's system; but after remaining, as it were, inactive for weeks and even months, as I have already remarked, without any apparent cause, it suddenly produces very evident effects; to wit, a coppery taste in the mouth, swelling of the gums, a real and copious salivation.

Sometimes it leaves the stomach and the whole system so irritable, that the patient cannot bear the smallest doses exhibited for subsequent syphilitic complaints, without experiencing great distress from cardialgia,

oppression at the breast, spitting of blood, headache, slow fever, and violent pains in different parts of the body.

From all these considerations, it appears that the preparations of mercury are capable of producing three distinct conditions in the system. In the first they attack and destroy the syphilitic virus, and occasion its action and all its injurious effects, or the symptoms of syphilis to disappear. In the second, they powerfully excite the action of the heart and arteries, produce great irritability in the system, and occasion ulcers of a particular kind; or they change the syphilitic ulcers into corrosive and very irritable ulcers, sometimes inducing mortification: it might be said that they produce a superoxygenation of the blood. The third condition which the use of mercurial preparations occasions, is universal debility, with a cachectic state, resembling scurvy; the fluids and solids are apparently decomposed, the hydrogen appears to abound, and the whole mass of blood seems to be hydrogenated. I shall proceed to the treatment of these morbid symptoms.

From the foregoing principles, I form three divisions in the treatment of the diseases produced by mercury. In the first, I shall propose the method of curing the diseases produced by excess of oxygen, whether this principle has been furnished by the preparations of mercury, or by the other medicines which have been lately tried for the cure of syphilis. In the second, I shall point out the mode of obviating the diseases accompanied by a state of debility, or cachexy, which appear to be dependant on a morbid abundance of oxygen, in the circulating fluids. In the third, I shall propose a

few means for mitigating or curing the effects which are probably owing to the presence of metallic mercury.

I have treated of complicated syphilitic complaints, and their method of cure, in one of the preceding chapters—chapter 29, to which I refer the reader.

As regards those cases of ophthalmia, which resist mercury and all other remedies, till the discharge from the urethra is renewed, see chapter 5.

I have taken notice likewise in many parts of this work, of several ulcers and fistulas, and of pains affecting the genitals and the contiguous parts, which resisting the action of mercury, are spontaneously cured by a new discharge being excited from the urethra.

In some cases the mercurial salts and oxides, destroy the syphilitic virus and all the symptoms of syphilis, without producing any disagreeable effects on the system, and without leaving any traces behind: this is the most desirable effect. In other instances, the same remedies excite a considerable action in the heart, and arteries, they increase the secretion of urine, and of the perspirable fluid, and sometimes produce inflammatory fever, local inflammation, swelling of the gums, and salivary glands, copious salivation* and painful ulcers in the mouth. These symptoms require, according to circumstances, one or more bleedings, cupping, or the

* To determine whether mercury produced the same effect on other animals, I made an experiment on a dog. I rubbed the common blue mercurial ointment on his back without being shaved, once a-day. In three days his mouth was affected; and though the frictions were discontinued from that time, the salivation became very great: he was so ill for a fortnight, that I despaired of his life. The salivation continued all this time, accompanied by a most abominable stench, which affected the whole house.

application of leeches to the inflamed parts. The ptyalism and ulcers in the mouth, require the means recommended in chapter 21.

In ulcers, which arise or which acquire great irritability during the use of mercury, the further administration of this remedy must be omitted; and if the physician attends in consultation with any of his professional brethren, he must endeavour to convince them that the symptoms are the mere effect of the mercury, and thus prevent the trial of any new preparation of mercury, generally proposed on such occasions, and which is often insisted on to the detriment of the patient; because instead of going to the real source of these effects, they are improperly ascribed to the inefficacy of the preparation which had been employed. The most important circumstance, without which nothing can be effected, is to discontinue the mercury. In such cases mercury proves a real poison.

The next point is to check the progress of the ulcers, by exhibiting the remedies and regimen appropriated to the condition of the patient, and of the new character which the disease has assumed.

The more I have examined this new condition of the ulcers, and other symptoms, the more I am persuaded, that it is owing to an accumulation of oxygen in the blood. The system appears, as I have stated, to be superoxygenated: in order to prevent the ravages of the disease, we must employ those remedies which are the most certain and expeditious in disoxygenating the system; and I observe with pleasure, that the late practice of the best informed physicians in Europe, perfectly accords with this new theory.

The sulphuret of potass or of soda; the sulphur or

alkaline mineral waters; bathing in the same, or in sea-water; astringents, especially cinchona in decoction, or infused in wine; and what is sometimes preferable, in lime water; the decoction of gall-nuts; the carbonate of potash or of soda, in doses of thirty or forty grains a-day; the carbonate of lime in large doses—have been considered as the most efficacious remedies.

Dr. Rollo, in his excellent work, which we have already spoken of, informs us, that in these ulcers accompanied with great irritability, success has attended the internal use of the hydrosulphuret of ammonia, in doses of three or four drops, three or four times a-day, and the application of the hydrosulphureted gas to the affected parts.

On the other hand, it appears that a very strict and purely vegetable diet, as well as the confinement in bed or in the room, contribute often to maintain this morbid irritability. Hence, it is proper to change this diet gradually to one more nourishing, consisting of fish, testacea, tender meats, and to allow the patient the moderate use of wine. It will be of importance to encourage him, as far as circumstances will permit, to leave his bed and enjoy the fresh air, which will contribute not a little to allay his fears, and to inspire him with patience and fortitude, and expedite the cure.

When the patient is much extenuated, and rendered extremely irritable, the internal and external use of opium, the extract of hyosciamus and cicuta, are very beneficial; in these cases sarsaparilla to the extent of an ounce a-day, in powder, or in strong decoction, mixed with milk, or according to circumstances, with the carbonate of soda, often proves very serviceable.

In very obstinate ulcers of the mouth or throat, ac-

accompanied by pain and an acrid ichorous discharge, borax or the subborate of soda, or the carbonate of soda dissolved in water, alone or mixed with alcohol and honey, constitute the best topical applications; or else after the manner of Sprengel, a gargle prepared with the decoction of galls.

Dr. Quarin states, that he employed with success, the extract of the *gratiola officinalis*, in the dose of eight grains given three or four times a-day, mixed with the same quantity of the carbonate of lime.

The cardialgias, or colics, excited by the preparations of mercury, in general quickly subside on discontinuing these remedies, or by giving the patient a grain of opium every evening, for several evenings.

The most immediate and safest antidote against the acrid preparations of mercury, as corrosive sublimate, &c. is according to the discovery of citizen Bérthollet, as stated above, the decoction of cinchona, or of any other substance abounding with the astringent principle.

When a sudden suppression of perspiration, during a course of mercury, has produced pains and universal spasms, fever, &c. the most efficacious remedies after the necessary evacuations are, as already stated, frequent warm baths, especially the vapour baths; and the internal exhibition of the yellow hydrosulphureted oxide of antimony, in conjunction with cicuta, in doses of fifteen grains of each, per diem; and according to circumstances, Dover's powder; and to calm the symptoms of irritation, opium administered once or twice a-day.

The other morbid state, which frequently occurs after the long continued use of mercury, and which I have denominated from its character, and the peculiar nature of the symptoms, *atonic* or *hydrogenated*, requires

remedies and means quite opposite to those just mentioned. I have already stated that this species of cachexy, hitherto termed scorbutic, on account of the resemblance to scurvy, appears to be produced by the evolution of hydrogen in the blood. It is the excess of this principle, set at liberty or rendered more active in the system, which must direct our judgement on the choice of the remedies.

From whatever cause this state proceeds, whether from the diet and air of the hospitals, or of the air of the chamber in which the patient has been long confined, or from the mercury as mercury, or finally whether it proceeds from a particular decomposition of the fluids and solids, occasioned by the too long continued action of the oxygen itself, which must be decided by future observations, we observe that the continued use of mercury evidently impairs the state of the patient, and even proves fatal. Hence, we must, above all, abandon the use of mercury, and change his diet and mode of living. If the patient has been confined to his bed, or to a small chamber, he should set up for half an hour or an hour, and so by degrees for the greater part of the day; he must go into a larger and more airy room, or what will be preferable, from the city or hospital into the country; he must take by degrees, as soon as his strength will permit, every day moderate exercise on foot or horseback or in a carriage. He should be ordered a nourishing and restorative diet, the decoction of malt, beer, acidulous wines, the juice of antiscorbutic plants, the acidulous or chalybeate mineral waters, and the other remedies adapted to this state. The atonic ulcers require the external application of carrot poultices, powdered sugar, rhubarb, columbo, and oxygen.

gas, or in some instances, to change the action of the diseased parts, alcohol alone or with camphor. Finally, there are particular cases of these ulcers, where the application of caustic is beneficial.

I come now to the treatment of the diseases which appear to be produced by metallic mercury, applied to the surface of the body, in the form of vapour; likewise of those which appear to proceed from the same metal, introduced into the system in the form of mercurial oxide or salt, but reduced to the metallic state, after abandoning the oxygen or acid with which it had been combined. In this state, especially when it has been administered imprudently, and without proper management, the infinitely minute particles, instead of passing off by perspiration, or by the saliva, in proportion as they are set at liberty, seem to unite in globules, or in more or less considerable masses, and are thus sometimes deposited in the great cavities of the body, in the bones, in the viscera, in the joints, or between the sheaths of the tendons and muscles, and produce deep seated pains, violent headaches, spasms in different parts, tremors of the extremities, paralysis, &c.; complaints which, owing to a superficial examination, are often improperly considered as old syphilitic complaints. Numerous and well authenticated observations, made on examining the bodies of persons to whom large quantities of mercury had been administered while living, prove incontrovertibly that the mercury is sometimes extravasated, and even more frequently than is generally imagined.

When, after a thorough examination, we suspect the existence of such a cause, we must endeavour, by every possible means, to excite the absorption of the mercury, to re-convey it into the circulation, and expel

it by perspiration. Warm baths, especially of sulphur springs, vapour and shower baths, frictions of the whole body, and of the parts affected, the internal use of the same mineral waters, powerful sudorifics, the yellow hydrosulphureted oxide of antimony, and guaiacum, have been found to be the most efficacious remedies. If the disease is in the joints or muscles, we may try electricity, frictions with sulphur, the pressing and kneading of the body after bathing, the internal exhibition of sulphur, or of the hydrosulphuret of potass, soda, or ammonia, dissolved in a large quantity of water, giving an ounce or half ounce of this solution every half hour; this is the best mode of administering the alkalies, as not oppressing the stomach. These are the only means which, in the present state of our knowledge, we can suggest, until we receive more positive information of the method adopted by the Malays and Hindoos, who, according to the authentic accounts I have received, are in possession of a more perfect method of treating these complaints than we are acquainted with in Europe.

Perhaps it will be agreeable to my readers to know what I have learnt on this subject from one of my friends.

He informs me, that the Malay physicians, who, like the family of the Asclepiades, form a distinct cast, transmit their medical knowledge from father to son for several generations, but that they preserve this knowledge a secret in their own family.

When consulted for a venereal complaint, they first of all examine, as they state, whether the complaint is not rather owing to mercury imprudently administered to the patient previously; that is, whether the disease is not rather mercurial than syphilitic. They endeavour to

learn, as they express it, whether there is not some mercury remaining in the system. They satisfy themselves on this head by some particular means, which they pretend to possess, and which they keep a secret. When they have satisfied themselves that the disease is mercurial, they give the patient a decoction of plants, which they prepare themselves. This remedy occasions violent pains over the whole body, followed by swelling of the face and head, which gradually extends to the arms, chest, abdomen, and lower extremities, when the pain in the feet becomes very severe. At this period, they prepare a warm bath with herbs, in which they plunge the patient; they pretend that the mercury has been drawn and collected in the feet by the process they have employed, and that, by means of the bath, it is disengaged and expelled from the body of the patient. The fact is, that on coming out of the bath, the patient is perfectly easy, and free from pain, and is radically cured of all his complaints.

My friend has been an eye witness of all I have related. His servant was affected with a most violent venereal ophthalmia, after a gonorrhœa, for which the European surgeons, who had been consulted in that country, had prescribed large quantities of mercury without any relief. This man, whom I saw some years after in Europe, assured me, that he experienced all what his master had stated, as I have presented it to my readers, and that he has been perfectly well ever since.

CHAPTER XXXIV.

Observations on some dangerous or unhappy prejudices, generally prevailing respecting Syphilis.

IT is an opinion imbibed by some patients, that the venereal virus, when once absorbed into the system, can by no means be totally eradicated; consequently they believe, that a person who is once thoroughly infected, can never look upon himself as radically cured. This opinion, besides its absurdity, renders those who entertain it very unhappy. I have seen frequent instances, in the female sex especially, where such patients led a most miserable and melancholy life, notwithstanding every thing the physician could say to the contrary. The least headache, the slightest rheumatic pain, or the smallest pimple upon the skin, were by such patients accounted certain proofs of the virus lurking in the system, and about to produce the most direful effects. These patients are real objects of compassion: we ought to bestow some time for inquiry, and pay the most careful attention towards them; for we can hardly think of a greater degree of misery, than to be perpetually haunted with such fears. They can only be cured by relieving them of this prejudice. In case the patients have been exposed to the infection, without having contracted any symptom, we may frequently succeed in curing them, by administering small doses of mercury, and inspiring them with confidence in our knowledge and skill; and by thus exciting their hopes of a cure, we shall succeed, for the most part, in a few weeks or months, in effectually and radically cur-

ing these disorders of the imagination. But if, after the use of this remedy, the patients continue in their fears, and upon a careful inquiry, we find no syphilitic symptoms, we should endeavour to correct their prejudice, by setting before them the examples of others of their acquaintance; or, if circumstances permit, of those of our own, who have been affected as much as themselves, or perhaps much more, who now, perhaps, after a great number of years, enjoy the most perfect state of health, are married, and have fine healthy children. When such statement has not produced the desired effect, I have succeeded in cases apparently desperate, by relating to the patient, that I had been unfortunately infected with the disease in all its stages, at different periods of my life. I have told them to observe, that even in my fiftieth year I enjoyed perfect health, having neither headache, nor disorder in my stomach, nor the slightest indisposition; and that, for fifteen years, no man could be freer from disease.

The same attention we ought to pay to those who imagine, that if mercury is once taken for the cure of syphilis, it will not so effectually cure it a second time. These prejudices are most frequently found among the women, though sometimes also men of a melancholic temperament, will be influenced by them.

There is another prejudice, of which I am about to speak, which is not only absurd, but criminal, and deserves a most severe punishment from the magistrate, whenever it can be proved. It exists only among some young men of a loose character, and dissolute and brutal manner of thinking. With these wretches it is an opinion, that the best method to get rid of a clap, is coition with one or more healthy women; and in this

manner I have seen syphilitic complaints propagated, in the course of a few days, to ten or twelve healthy persons, who had the misfortune to fall in with these wretches, or with the objects of their brutality. The absurdity of this notion is evident to every person of common sense, who has the least knowledge of the nature and seat of the disease; and, where this practice arises merely from prejudice, the slightest information will be sufficient to remove it. But it is to be feared, that the cause may frequently lie deeper in the heart of these persons; and that this abominable practice proceeds from malignity, or from a mean and low disposition to revenge themselves upon innocent persons, because in their imprudence or drunkenness they themselves had become the dupes of others.

Finally, there are persons who think they can avoid all risk of contracting the disease, by seeking an unnatural source of gratification with persons of either sex. The fact is, that not only the syphilitic and other complaints, contracted either passively or actively in this way, are very frequent, but, what increases the danger, these diseases, and especially the ulcers contracted in this way, are generally more malignant and more difficult of cure, than the ulcers and gonorrhœas contracted from the organs of generation.

PHARMACOPŒIA SYPHILITICA.

COMPOSITA.

AQUÆ.

1. AQUA CALCIS.

℞ Calcis recenter ustæ, libram unam.

Sensim affunde aquæ libras octo.

Agitetur vas paululum; dein subsidat calx, et aqua decantata in lagenis probe obturatis usui servetur.

2. AQUA CAMPHORATA.

℞ Camphoræ, drachmam unam.

Alcoholis diluti, quantum satis ut solvatur camphora, dein adde aquæ fervidæ quantum opus ut camphora soluta teneatur.

Filtra et serva usui.

3. AQUA PICEA.

℞ Picis liquidæ, libras duas.

Aquæ, libras octo.

In vase ligneo vel terreo mixta agita baccillo ligneo per horam; deinde per duodecim horas subsidat liquor et decantetur.

Usus: Herpes; morbi cutis; blennorrhœa.

Nota. Quandoque, picis loco, sumitur Terebinthina larigna, simulque adduntur Gummi-Resinæ Myrrhæ, drachmæ duæ.

BOLI.

4. BOLUS EX HYDRARGYRO GLYCYRRHIZATO.

℞ Hydrargyri, grana decem.

Extracti glycyrrhizæ glabræ, scrupulum unum.

Terantur simul, donec globuli hydrargyri perfecte disparuerint.

Fiat bolus.

5. BOLUS EX OXYDO HYDRARGYRI RUBRO.

℞ Oxydi Hydrargyri rubri,

Succi papaveris somniferi inspissati, ana granum unum.

Extracti glycyrrhizæ glabræ, quantum satis.

Misce, fiat bolus.

6. BOLUS STIBIATUS.

℞ Sulfureti stibii lævigati, drachmam semis.

Conservæ herbæ Cochleariæ hortensis, scrupulum unum.

Syrupi simplicis, quantum satis.

Ut fiat bolus bis de die sumendus.

CATAPLASMATA.

7. CATAPLASMA AD BLENNORRHAGIAM.

℞ Lactis calidi, libram unam.

Micæ panis, quantum satis.

Olei olivarum, unciam semis.

Ut fiat cataplasma.

Adde, pro re nata,

Camphoræ cum oleo tritæ, drachmas duas.

Vel,

℞ aquæ calidæ, libram unam.

Acetitis plumbi liquidi, unciam unam—duas.

Micæ panis, quantum satis.

Misce et adde

Axungię porcinae, unciam unum.

8. CATAPLASMA DISCUTIENS.

℞ Radicis Atropa-mandragoræ pulv. quantum opus.

Coque cum aquæ sufficiente quantitate ad consistentiam cataplasomatis.

9. CEREI MEDICATI, variæ magnitudinis.

DECOCTA.

10. DECOCTUM ANTI-CACHECTICUM.

℞ Radicis et foliorum recentium Cichorium—intybi.

————— Rumex-acetosæ

Radicis et foliorum *Fragaria-vescæ*.

————— *Centaurea-calcitrippæ*.

————— *Violæ odoratæ*.

Florum *Nymphææ albæ*, ana unciam semis.

Petalorum *rosæ gallicæ*, uncias duas.

Radicis *parietariæ officinalis*, unciam semis.

Coque in vase terreo vernice obducto cum aquæ libris
duodecim ad libras octo, colaturæ fervidæ adde,

Foliorum *Cassia-sennæ*, uncias quatuor.

Seminum *Pimpinella-anisi* pulverisatorum,

Nitratis potassæ fusi pulverisati, ana unciam semis.

Stent in infusione per viginti quatuor horas; Cola, et in
loco frigido in vasis probe clausis usui serva.

Dosis: Sumat uncias octo jejune per quadriduum; deinde omni
secundo die, per quadraginta-quatuor dies. Si temperamentum
ægri robustum est, sumat uncias decem vel duodecim pro
dosi; et si morbus valde obstinax, exhibeatur vesperi ante
decubitum, loco mane.

11. DECOCTUM ARCTIUM-LAPPÆ.

R Radicis *Arctium-lappæ* concisæ, uncias tres,

Coque in aquæ fontanæ libris tribus,

ad colaturam librarum duarum,

Sumat quotidie.

Usus: In iisdem casibus, ubi *sarsaparilla* adhibetur.

12. DECOCTUM ASTRAGALI EXSCAPI.

R Radicis *Astragali exscapi*, unciam semis.

Coque in aquæ fontanæ libra una semis,

ad colaturam libræ unius.

Sumat tepide mane et vespere.

Usus: Syphilis.

13. DECOCTUM DAPHNE-MEZEREI.

R Corticis radicis *Daphne-Mezerei*, drachmas sex.

Coque in aquæ fontanæ libris sex, ad libras quatuor;

Sub finem coctionis adde

Radicis *glycyrrhizæ glabræ*, unciam unam. Cola.

Dosis: Sumat quotidie libram unam ad libras quatuor, prout
ventriculus ferat.

Usus: Scrophula cum syphilitide complicata; Syphilis rebellis.

14. DECOCTUM GUAJACI OFFICINALIS.

℞ Ligni et corticis Guajaci officinalis rasi, libram unam.

Infunde in aquæ fervidæ, libris octo,

Per viginti quatuor horas; dein lento igne coque per sex horas; addendo, sub finem coctionis,

Alcoholis, uncias quatuor.

Radicis glycyrrhizæ glabræ, uncias duas.

Cola.—Sumat libram semis bis de die.

Massa a colatura residua denuo coquatur cum aquæ libris octo per bihorium, coletur.

Utatur hoc decocto secundario loco potus ordinarii.

15. DECOCTUM GUAJACI (*Hutten.*)

℞ Ligni Guajaci officinalis rasi, libram unam.

Macera in aquæ libris octo per noctem;

Sequenti mane lente coque ad libras quatuor.

Sumat æger hujus decocti tepidi libras duas de die, vivendo abstinenter et in cubili.

Nota Ulricus de Hutten sese hoc solo decocto perfecte curatum fuisse memorat.

16. DECOCTUM GUAJACI COMPOSITUM.

℞ Ligni et corticis Guajaci officinalis, uncias sex.

Radicis Laurus-sassafras, uncias quatuor.

Coque in aquæ fontanæ libris viginti-quatuor,

Ad libras duodecim; sub finem coctionis adde

Radicis glycyrrhizæ glabræ, vel

Passularum, uncias duas.

Cola.—Sumat libras duas de die.

17. DECOCTUM JUGLANDIS (*Pollini.*)

℞ Corticum ligneorum (qui sequuntur corticem viridem) nucum Juglandis regiæ, uncias octo-decem.

Radicis Smilax-sarsaparillæ,

—— Smilax-chinæ, ana unciam semis.

Sulfureti stibii nativi, in petia ligati,

Lapidis pumicis, in petia ligati, ana unciam semis.

Macerentur nocte in aqua, sequenti mane coque in libris octo aquæ, vase clauso; dein abjice petias, et coque residuum ad libras quatuor. Hujus decocti decantati, non filtrati, bibat æger libram unam mane et libram vesperi; superbibendo mane infusum althææ instar potus theati.

N. B. Quandoque adduntur apices corticis et sepimenta nucleæ.
—Vel etiam, pro re nata,
Carbonatis potassæ, grana decem.

Abstineat æger a carnibus gravioribus, fumigatis, sale conditis, acidis, vino, etc. Cæna sit brevis: in debilioribus decoctum detur parvis dosibus et sæpius.

N. B. Hoc decoctum dicitur esse genuinum antisypilicum, doctoris *Pollini*.

18. DECOCTUM LOBELIÆ SYPHILITICÆ.

℞ Radicis Lobeliæ syphiliticæ siccatae et concisæ, unciam semis.

Coque in aquæ fontanæ, libras duodecim,
ad colaturam librarum octo.

Sumat libram semis de die initio, deinde libram semis quater de die, donec vim purgantem amplius ferre non possit; tunc desistat per tres aut quatuor dies, dein iterum continuet, donec curatus fuerit.

19. DECOCTUM PRUNUS-PADI.

℞ Corticis Prunus-padi, uncias sex-octo.

Coque in Aquæ marinæ, vel in ejus defectu,

Aquæ fontanæ libris octo, ad colaturum librarum quatuor.

Sumat libram unam omni mane, in quatuor haustus divisam.

20. DECOCTUM SAPONARIÆ OFFICINALIS.

℞ Herbæ Saponariæ officinalis recentis contusæ, libram semis.

Aquæ, libras octo.

Coque ad colaturam librarum quatuor.

Sumat libras duas-quatuor, quotidie.

Usus: Syphilis; Scrophula; Morbi cutanei; Blennorrhagia.

21. DECOCTUM SMILAX-SARSAPARILLÆ.

℞ Radicis Smilax-sarsaparillæ concisæ, uncias tres.

Infunde in aquæ fervidæ libris tribus, per duodecim horas;

Dein coque ad colaturam librarum duarum.

Sumat quotidie; aut, si placet, cum lacte.

N. B. Quidam decocto huic decoctum Buxi substitui cum fructu posse, asserunt.

22. DECOCTUM SMILAX-SARSAPARILLÆ CORRECTIUS.

℞ Radicis Smilax-sarsaparillæ concisæ, uncias tres.

Aquæ bullientis, libras tres.

Infunde per horas quatuor prope ignem; dein expresso liquore, probe contundatur radix, cui iterum adjice liquo-

rem; macera per horas septem, postea coque ad libras duas, et fortiter exprimendo cola.

Sumat libram semis, ter quaterve de die.

N. B. Quandoque in morbis syphiliticis rebellibus huic decocto cum successu additur carbonatis sodæ drachma una, de die.

23. DECOCTUM SARSAPARILLÆ CUM MEZEREIO.

℞ Radicis Smilax-sarsaparillæ, uncias tres.

Corticis radices Daphne-mezerei, drachmas duas.

Concisa coque in

Aquæ fontanæ libris tribus ad libras duas.

Sub finem coctionis adde,

Radicis Glycyrrhizæ glabræ concisæ, unciam unam.

Sumat quater de die, libram semis.

24. DECOCTUM SARSAPARILLÆ COMPOSITUM.

℞ Radicis Smilax-sarsaparillæ,

Ligni Laurus-sassafras,

—— Pterocarpi santalini,

—— Guajaci officinalis, ana uncias tres.

Radicis Daphne-mezerei, unciam unam.

Seminum Coriandri sativi, drachmas sex-unciam unam.

Concisa coque in aquæ fontanæ libris viginti ad libras decem.

Sumat libram unam-tres de die.

Vel:

℞ Radicis Smilax-sarsaparillæ,

Ligni Pterocarpi santalini,

—— Santali albi, ana uncias tres.

Radicis Glycyrrhizæ glabræ,

—— Daphne-mezerei, ana unciam semis.

Ligni Genistæ Canariensis,

—— Guajaci officinalis,

—— Laurus-sassafras, ana unciam unam.

Sulfureti stibii nativi, uncias duas.

Concisa infunde in aquæ fervidæ libris decem per viginti quatuor horas; dein coque ad colaturam librarum quinque.

Sumat libram unam semis ad libras quinque quotidie.

25. DECOCTUM SOLANUM-DULCAMARÆ.

℞ Stipitum Solanum-dulcamaræ recentium concisorum, drachmam semis.

Coque in Aquæ fontanæ libra una, ad colaturam libræ semis.
Sumat quotidie cum anatica portione lactis.

Usus: Lepra; Herpes; Scrophula; Symptomata syphilitidis inveterata et rebellia.

26. DECOCTUM SYPHILITICUM (*Yvon. Gaukes.*)

℞ Ligni Guajaci officinalis rasi, uncias tres.

Ligni Juniperi communis, uncias duas.

Radiciſ Smilax-chinæ, unciam unam.

Hydrargyri purificati, in sacco linteï humido ligati,

Sulfureti stibii, in sacco separatim ligati, ana unciam unam.

Infunde in Aquæ fervidæ libris duodecim,

per duodecim horas; dein coque ad libras sex.

Sub finem coctionis adde,

Radiciſ glycyrrhizæ glabræ, uncias duas.

Cola.—Sumat uncias triginta-quadragenta, calide quotidie, per 30 ad 50 dies.

27. DECOCTUM SYPHILITICUM ROBORANS.

℞ Sulfureti stibii nativi pulverisati, et in petia ligati, uncias quatuor.

Lapidis Pumicis pulverisati, et in petia separatim ligati, uncias duas.

Radiciſ Smilax-sarsaparillæ,

—— Smilax-chinæ, ana uncias duas.

Nucum Juglandis regiæ immaturarum, cum hilis, putaminibus, et cortice viridi, siccatarum N^o. quadragenta.

Concisa, mista, coque in

Aquæ fontanæ libris viginti, ad libras decem.

Remanentem liquorem, per linteum colatum, quatuor lagenis inde, quæ bene clausæ, usu servantur.

Sumat dimidium lagenæ mane, et dimidium vespero, tepide.

Magma decocti denuo coquatur cum aqua, ut ante; quo decocto secundo abluantur loca ulceribus, aliisve morbis cutis affecta.

28. DECOCTUM ULMI CAMPESTRIS.

℞ Corticis interioris ramulorum et arboris junioris

Ulmï campestris, uncias quatuor.

Aquæ libras quatuor.

Coque ad colaturam librarum duarum.
Sumat uncias quatuor—octo bis terve die.

Usus: Lepra aliiue morbi cutanei.

ELECTUARIA.

29. ELECTUARIUM ANTI-SYPHILITICUM.

℞ Roob baccarum Sambuci nigri, uncias tres.

Extracti Gratiolæ officinalis, drachmas tres.

Muriatis Hydrargyri oxygenati, grana tria. Misce.

Nota. Quandoque extracto Gratiolæ extractum Aconti canimari eadem dosi cum fructu substituitur.

Usus: Herpes; tumores dolentes, aliava syphilitidis rebellis symptomata (STOLL.)

30. ELECTUARIUM CINCHONÆ CUM SODA.

℞ Carbonotis Sodæ, drachmas duas.

Corticis Cinchonæ officinalis pulverisati, unciam unam.

Mucilaginis gummi Mimosæ Niloticæ, quantum satis.

Misce. Sumat drachmas duas bis terve de die.

Usus: Scrophula cum syphilitide complicata: item ad præparandum corpus antequam ad usum Hydrargyri progredi liceat.

31. ELECTUARIUM LAXANS.

℞ Pulpæ fructus Tamarindi Indicæ, unciam unam.

Sulphuris præcipitati,

Nitratis Potassæ, ana drachmam unam.

Syrupi corticum fructus Citrus-aurantii, quantum satis, ut fiat Electuarium magnitudine nucis moschatæ mane et vespere sumendum.

EMULSIONES.

32. EMULSIO AMYGDALARUM.

℞ Amygdalarum dulcium decorticatarum, uncias duas.

Terantur in mortario successive addendo,

Aquæ fontanæ, libras duas.

Aquæ corticis Lauris-cinnamomi, uncias duas.

Sacchari albi, quantum satis ad gratiam.

33. EMULSIO CAMPHORATA.

Fit addendo priori

Camphoræ, amygdalis vel pineis subactæ, grana viginti quatuor.

ENEMATA.

34. ENEMA CATHARTICUM.

℞ Decocti Hordei, vel juris carnium, uncias sex.
 Olei seminum Lini usitatissimi, uncias duas.
 Sulfatis sodæ (vel sulfatis potassæ) unciam unam.
 Misce; sensim ac sensim caute injiciatur.

35. ENEMA SEDATIVUM.

℞ Olei Olivarum (vel olei Lini), uncias quatuor.
 Laudani liquidi Sydenhami, guttas quadraginta,
 ad sexaginta.
 (Vel extracti opii aquosi, grana duo-tria).

Vel:

℞ Amyli, drachmam unam semis.
 Adde paulatim terendo,
 Aquæ bullientis, libram semis.
 Coque paulisper, et adde,
 Laudani liquidi Sydenhami, drachmam unam.
 Misce.

Usus: Dolores spasmodici colli vesicæ et prostatae.

GARGARISMATA.

36. GARGARISMA E BORACE.

℞ Boracis, unciam unam.
 Solve in Aquæ fervidæ libra una; adde
 Mellis,
 Tincturæ Myrrhæ, ana uncias duas.

Usus: Ulcera oris et faucium ex usu hydrargyri productis.

37. GARGARISMA EX ALCOHOLE.

℞ Alcoholis diluti (vel pro re nata),
 Alcoholis concentrati, quantum placet.

Usus: Ulcera faucium atonica et syphilitica.

38. GARGARISMA EX HYDRARGYRO.

℞ Decocti Hordei, libram unam.
 Murias Hydrargyri oxygenati, grana sex.
 Mellis rosacei, uncias duas.

Misce.

HAUSTUS.

39. HAUSTUS AD BLENNORRHOEAM.

℞ Resinæ liquidæ Copaiferæ officinalis, drachmam semis.
 Dissolve in vitelli ovi dimidio; dein adde,
 Gummi Mimosæ Niloticæ, drachmam unam.
 Aquæ, uncias quatuor.
 Misce, pro haustu mane et vesperi sumendo.

Vel:

℞ Resinæ liquidæ Copaiferæ officinalis, guttas triginta-quadr-
 ginta.
 Aquæ, unciam unam.
 Sumat mane et vesperi.

INFUSA.

40. INFUSUM CANNABIS SATIVÆ.

℞ Seminum Cannabis sativæ, unciam semis-unam.
 Infunde in
 aquæ fervidæ libris quatuor,
 per mediam horam.—Cola.

Bibat pro potu ordinario cum sacchari quantum satis ad gra-
 tiam.

41. INFUSUM LEDI PALUSTRIS.

℞ Herbæ Ledi palustris, unciam semis.
 Aquæ fervidæ, libram unam.
 Infunde per horam et cola.

Sumat libram semis ad libram unam de die.

42. INFUSUM MALVÆ.

℞ Foliorum Malvæ rotundifoliæ, manipulos tres.
 Infunde in aquæ fervidæ, libris quatuor.
 Cola. Pro potu ordinario cum saccharo.

INJECTIONES.

43. INJECTIO EX ACIDO MURIATICO OXYGENATO.

℞ Aquæ puræ, gaze acido muriatico oxygenato imprægnatæ,
 quantum placet.
 Injiciat sexies aut octies de die.

44. INJECTIO EX MURIATE HYDRARGYRI OXYGENATO.

℞ Muriatis Hydrargyri oxygenati, granum semisunum.

Aquæ, libram unam.

Misce, injiciat portionem omni hora vel bihorio.

Vel:

℞ Aquæ puræ, uncias sedecim.

Muriatis Hydrargyri oxygenati, grana duo.

Acetitis Plumbi liquidi, guttas triginta.

Misce. Portio hujus ter quaterve de die post mictionem injiciatur.

45. INJECTIO EX ACETITE ZINCI.

℞ Oxydi Zinci, quantum placet.

Acidi Acetosi, quantum opus ad perfectam solutionem.

℞ Hujus Solutionis, guttas viginti

Solve in Aquæ puræ, unciis quatuor.

Injiciat portionem sæpius de die.

46. INJECTIO OLEOSA.

℞ Olei Olivarum, uncias tres.

Injiciat ter quaterve de die portionem.

47. INJECTIO SEDATIVA.

Extracti Opii aquosi, drachmas tres.

Aquæ destillatæ, uncias duodecim.

Solve et adde,

Acetitis Plumbi, drachmam unam—tres.

Misce. Injiciat portionem quater de die, reddito prius lotio.

Vel:

℞ Acetitis Plumbi, grana decem.

Laudani liquidi Sydenhami, drachmam unam.

Aquæ Rosæ gallicæ, uncias sex.

Misce.

48. INJECTIO SEDATIVO-ADSTRINGENS.

℞ Pulveris cerussæ compositi (*Ph. Lond.*), grana sexaginta.

Sulfatis Zinci, grana octodecim.

Aquæ Florum Tiliæ, vel Rosæ, uncias duodecim.

Misce. Injiciatur portio omni bihorio vel quadrihorio, quamdiu dolorem magnum non causet.

49. INJECTIO ALUMINOSA COMPOSITA.

℞ Aluminis, drachmam semis.

Acetitis Plumbi, drachmam unam.

Sulfatis Zinci, grana octodecim.

Aquæ destillatæ, uncias sedecim.

Nota. Hæc mixtura incongrua a quibusdam in Blennorrhœa rebelli multum laudatur.

50. INJECTIO EX CUPRO AMMONIACATO.

R Sulfatis Cupri, quantum placet,

Dissolve in Aquæ destillatæ, quantum sufficit;

Dein instilla

Potassæ liquidæ, quantum opus,

Ut cuprum omne præcipitetur.

Pulverem hunc præcipitatum probe edulcoratum dissolve in Carbonatis Ammoniacæ liquidæ, quantum opus.

R Hujus solutionis cœruleæ, guttas sex aut octo dissolve in

Aquæ destillatæ, unciis duabus.

Injiciat æger portionem caute toties quoties urinam mittit.

Vel:

R Oxydi Cupri acetosi, drachmam unam.

Dissolve in

Carbonatis ammoniacæ liquidi, unciis duabus.

Hujus solutionis, guttulas tres-quatuor dissolve in

Aquæ destillatæ, uncia una.

51. INJECTIO EX MURIATE HYDRARGYRI.

R Muriatis hydrargyri, unciam semis.

Aquæ destillatæ, uncias octo.

Misce agitando.

52. INJECTIO EX SULFATE ZINCI CAMPHORATA.

R Sulfatis Zinci, grana sexaginta.

Aquæ camphoratæ, uncias duas.

Aquæ puræ, uncias triginta.

Misce.

53. INJECTIO EX SULFATE CUPRI.

R Sulfatis Cupri, grana quatuor-sex.

Aquæ destillatæ, uncias quatuor.

Misce.

54. INJECTIO EX HYDRARGYRO ET PLUMBO COMPOSITA.

R Oxydi plumbi semi-vitrei, unciam unam.

Muriatis Hydrargyri oxygenati, drachmam semis.

Acidi acetosi, uncias quinque.

Digere in loco calido per duodecim horas, sæpius agitata

phiala; dein effunde liquorem per subsidentiam depuratum, qui servetur usui.

℞ Hujus liquoris drachmæ duæ-quatuor, misceantur cum aquæ destillatæ unciis quatuor, ejusque portio ter quaterve de die injiciatur.

55. INJECTIO EX GUMMI-RESINA KINO.

℞ Gummi-resinæ Kino, grana vinginti-triginta.

Aquæ bullientis, libram unam.

Infunde per horam et cola.

56. INJECTIO EX GALLIS.

℞ Gallarum pulverisatarum, drachmas duas.

Aquæ bullientis, libram unam.

Infunde per horam et cola.

57. INJECTIO AD BLENNORHOEAM (*Justamond.*)

℞ Sulfatis Zinci, drachmas duas.

Acetitis Plumbi, scrupulos quatuor.

Camphoræ pauxillo alcoholis tritæ, scrupulum unum semis.

Extracti Opii aquosi, scrupulum unum.

Aquæ Rosæ, libras duas—quatuor.

Nota. Quandoque, loco acetitis plumbi, adduntur

Muriatis Hydrargyri oxygenati, grana quatuor.

58. INJECTIO AD LEUCORRHOEAM, (*Younge.*)

℞ Acetitis Plumbi, drachmas duas.

Aquæ Rosæ, libram unam semis.

Aceti, libram semis.

Misce. Portio hujus in vaginam sæpias injiciatur.

59. INJECTIO AD PHIMOSIN.

℞ Sulfatis Cupri, grana sex.

Aquæ puræ, uncias quatuor.

Solutioni adde,

Acetitis Plumbi liquidi, guttas viginti.

LINCTUS.

60. LINCTUS AD APHTHAS.

℞ Mucilaginis seminum Pyrus-cydoniæ,

Syrupi fructus Mori nigræ, ana unciam unam.

Boracis, drachmam unam—duas.

Uusus: Aphthæ; ulcera oris ex hydrargyro.

LINIMENTA.

61. LINIMENTUM AMMONIACÆ FORTIUS.

℞ Ammoniacæ, unciam unam.

Olei Olivarum, uncias duas.

62. LINIMENTUM AMMONIACÆ MITIUS.

℞ Carbonatis ammoniacæ liquidi, drachmas tres-quatuor.

Olei Olivarum, uncias duas.

Quandoque adduntur

Alcoholis camphorati, drachmæ tres.

63. LINIMENTUM CAMPHORATUM.

℞ Camphoræ tritæ, uncias duas.

Olei Palmæ liquefacti et fere frigefacti, libram unam.

Usus egregius ad suppurationem promovendam, et ad dolores sedandos.

64. LINIMENTUM CUPRATUM.

℞ Oxydi Cupri acetosi, grana quatuor.

Olei Olivarum, unciam unam.

Linteam carptum hocce liquore imprægnatum applicatur ulceribus, semel de die.

65. LINIMENTUM RESOLVENS.

℞ Alcoholis diluti, uncias octo.

Carbonatis potassæ liquidi, unciam unam.

———— Ammoniacæ liquidi, drachmas duas.

Misce.

Vel:

℞ Ammoniacæ, unciam semis.

Petrolei, unciam unam semis.

Misce.

LIQUORES.

66. LIQUOR AD CONDYLOMATA. (*Plenck*).

℞ Alcoholis,

Acidi acetosi, ana unciam semis.

Muriatis hydrargyri, oxygenati, drachmam unam.

Aluminis,

Camphoræ,

Oxydi Plumbi acetosi, ana drachmas semis.

Misce.

Usus: Verrucæ aut Condylomata penicillo hoc liquore madida semel vel bis de die tangantur.

67. LIQUOR AD ULCERA ORIS ET FAUCIUM.

℞ Tincturæ Myrrhæ, unciam unam.

Mellis Cuprati, unciam semis.

Misce. Portio hujus applicetur penicillo, mane et vesperi.

Vel:

℞ Sulfatis Cupri, grana duo,

Aquæ destillatæ, uncias quatuor.

Misce.

Vel:

℞ Nitratis Argenti, partem unam,

Aquæ destillatæ, partes mille.

Usus: Hic liquor ad *Hahnemann* multum laudatur in ulceribus oris aliarumve corporis partium, ex usu hydrargyri causatis.

68. LIQUOR AD ULCERA ATONICA.

℞ Muriatis hyperoxygenati Potassæ, drachmam unam.

Aquæ destillatæ, uncias duodecim.

Portio hujus liquoris penicillo applicetur, semel vel bis de die.

LOTIONES.

69. LOTIO EX ALCOHOLE.

℞ Alcoholis simplicis vel aromatisati, quantum placet.

Linteum carptum eodem madidum sæpius de die ulceri applicetur.

70. LOTIO EX HYDRARGYRO ET PLUMBO COMPOSITA.

℞ Muriatis Hydrargyri oxygenati, grana decem,

Acetitis Plumbi, drachmam semis.

Aquæ Rosæ, libram unam.

Misce.

71. LOTIO PLUMBATA.

(*Vulgo* Aqua Saturnina Goulardi.)

℞ Aquæ destillatæ, libras duas.

Alcoholis, unciam unam.

Acetitis Plumbi liquidi, drachmas duas-quatuor.

Misce.

Quandoque, loco alcoholis, adduntur
Alcoholis Camphorata, drachmas duas-quatuor.

72. LOTIO SYPHILITICA ROBORANS.

R Decocti syphilitici roborantis, quantum opus.

73. LOTIO SYPHILITICA LUTEA.

(*Vulgò* Aqua phagedænica.)

R Muriatis Hydrargyri oxygenati, grana tringinta
Aquæ Calcis, libras duas.

Triturando misce.

74. LOTIO SYPHILITICA NIGRA.

R Muriatis Hydrargyri, drachmam unam.
Aquæ Calcis, uncias quatuor. Misce.

75. LOTIO E SULFATE ZINCI.

R Sulfatis Zinci, grana duo.
Aquæ destillatæ, uncias quatuor.

76. LOTIO ZINCI COMPOSITA.

R Aquæ Calcis, uncias duas.
Oxydi Zinci, grana duodecim.
Sulfatis Cupri, grana tria—quatuor.
Mellis rosacei, drachmam unam.

Usus. Hæc lotio secrete habita, nuper recommendata fuit ut remedium eximium ad ulcera phagedænica genitalium.

77. LOTIO ZINCI CAMPHORATA.

R Sulfatis Zinci,
Alcoholis Camphorati, ana unciam semis.
Aquæ destillatæ fervidæ, libras duas,
Misce et per chartam cola.

Usus: Ulcera atonica, flaccida.

MELLA.

78. MEL CUPRATUM.

R Oxydi Cupri acetosi, unciam unam.
Aceti, uncias septem.

Solutioni adde,

Mellis despumati, uncias quatuordecim.

Coque leni igne ad consistentiam congruam.

Usus egregius externus in ulceribus atonicis.

79. MEL HYDRARGYRATUM.

R Hydrargyri,

Mellis, ana unciam unam.

Tere simul, donec hydrargyrum perfecte disparuerit.

Usus: Hoc Mel ad deliganda ulcera syphilitica omnibus unguentis præferri meretur.

Vel:

R Muriatis hydrargyri, drachmam unam-duas.

Mellis, unciam unam.

Misce. *Usus* idem ac prioris.

MIXTURÆ.

80. MIXTURA LAXANS.

R Gummi Mimosæ Niloticæ, unciam unam,

Olei Amygdalarum, uncias duas.

Decocti Hordei, uncias decem.

Mannæ, unciam unam.

Mellis, unciam semis.

Misce. Sumat cochlearia quatuor bis terve die.

81. OXYDUM HYDRARGYRI UNGUINOSUM.

R Solutionis Hydrargyri in Acido Nitrico, quantum placet.

Saponis ex oleo amygdalino aut butyro cacao et potassa parati, quantum opus.

Solve saponem in aqua fervida, eique adde successive, constanter movendo, solutionem hydrargyri.

Nota. Theoria hujus processus est compositio et decompositio duplex: Acidum nitricum sese potassæ unit, dum oleum liberum cum hydrargyro junctum oxydum hydrargyri unguinosum constituit, quod usui externo æque ac interno utiliter servire potest.

PHOSPHAS CALCIS STIBIATUS. Vid. Pulvis stibiatus.

PILULÆ.

82. PILULÆ AD BLENNORRHOEAM ROBORANTES.

R Sulfatis Cupri, grana decem.

Radiciis Rhei palmati, drachmam unam.

Extracti Cinchonæ officinalis, drachmas duas.

Misce ut fiant pilulæ N°. triginta.

Sumat pilulam unam-duas bis de die.

83. PILULÆ AD BLENNORRHOEAM STIMULANTES.

℞ Terebinthinæ coctæ, drachmas duas.

Radiciſ Rhei palmati, drachmam unam.

Misce ut fiat massa dividenda in pilulas triginta sex.

Sumat pilulas quatuor bis de die.

Nota. Quandoque adduntur limaturæ ferri, vel oxydi ferri lutei, grana decem.

Vel:

℞ Gummi Mimosæ Niloticæ,

Radiciſ Rhei palmati, ana unciam unam.

Resinæ liquidæ Copaiferæ officinalis, quantum satis ut fiant pilulæ granorum quatuor.

Sumat Pilulas quatuor-sex mane et vesperi.

Vel:

℞ Resinæ liquidæ Pinus Balsameæ, uncias duas.

Gummi-resinæ Kino, unciam semis.

Radiciſ Tormentillæ erectæ, quantum satis ut fiant pilulæ granorum quinque.

Sumat pilulas quatuor mane et vesperi.

84. PILULÆ CATHARTICÆ.

℞ Massæ pilularum Rufi, drachmam semis.

Resinæ Convolvulus-jalappæ,

Muriatis hydrargyri, ana grana quatuor.

Misce; fiant pilulæ N°. tres.

Sumantur pro dosi.

85. PILULÆ EX HYDRARGYRO GLYCYRRHIZATO.

℞ Hydrargyri,

Extracti mollis Glycyrrhizæ glabræ, ana unciam unam.

Radiciſ Glycyrrhizæ glabræ pulverisatæ, drachmam unam.

Hydrargyrum cum extracto glycyrrhizæ tere, donec globuli hydrargyri disparuerint; deinde adde pulverem glycyrrhizæ, ut. fiat massa in pilulas granorum quinque formanda.

Sumat pilulas duas hora somni, vel omni mane et vesperi.

86. PILULÆ EX HYDRARGYRO GUMMOSO.

℞ Hydrargyri purificati, scrupulum unum.

Amyli, drachmam unam.

Terantur cum mucilaginis gummi Mimosæ Niloticæ, quantum sufficit, donec globuli hydrargyri perfecte disparuerint;

dein formentur inde cum pulvere radices Glycyrrhizæ glabræ, pilulæ N°. viginti.

Sumat pilulas duas—quatuor omni die.

87. PILULÆ EX HYDRARGYRO MELLITO.

℞ Hydrargyri,

Mellis, ana unciam unam.

Extracti Glycyrrhizæ glabræ, uncias duas;

Vel pro re nata,

Gummi-resinæ Guajaci officinalis, quantum satis ut fiant pilulæ granorum quatuor.

Sumat pilulas duas-tres mane et vesperi.

88. PILULÆ EX HYDRARGYRO TEREBINTHINATO.

℞ Hydrargyri purificati, unciam unam.

Resinæ liquidæ Pinus-laricis (*terebenthina*.) drachmam unam semis.

Terantur simul, donec hydrargyrum perfecte disparuerit, addendo, si opus sit, guttulas aliquot olei volatilis terebinthinæ; dein cum pulveris radices Glycyrrhizæ glabræ quantum satis, fiant pilulæ N°. octoginta.

Sumat unam vel duas pilulas omni mane, et, pro re nata, etiam vespere.

89. PILULÆ E MURIATE HYDRARGYRI.

℞ Muriatis Hydrargyri, drachmam semis.

Opii, grana quindecim.

Tartritis Potassæ stibiati, grana quatuor.

Conservæ fructus Rosæ caninæ, quantum satis ut fiat massa dividenda in pilulas quindecim.

Sumat pilulam unam omni nocte.

90. PILULÆ E NITRATE HYDRARGYRI AMMONIACALI.

℞ Nitratiss Hydrargyri ammoniacalis, grana viginti quatuor.

Tere cum

Extracti Glycyrrhizæ glabræ, quantum satis

Ut fiant pilulæ N°. triginta quatuor, conspergendæ pulvere aromatico.

91. PILULÆ EX OXYDO HYDRARGYRI RUBRO.

℞ Oxydi Hydrargyri rubri lævigati, grana octo.

Extracti Glycyrrhizæ glabræ, quantum satis ut fiat massa dividenda in pilulas duodecim.

Nota. Quandoque adduntur Opii grana octo.

Sumat pilulam unam omni nocte, vel duabus noctibus continuis, intermissa tertia.

92. PILULÆ E SULFURETO HYDRARGYRI-STIBIATO.

℞ Hydrargyri, uncias quatuor.

Sulfureti stibii, uncias tres.

Sulphuris, uncias duas.

Misce. Probe, et, diu tritis, adde,

Mellis quantum satis

Ut fiant pilulæ granorum quinque.

Sumat pill. IV bis terve de die.

Usus: Morbi ossium syphilitici.

93. PILULÆ SEDATIVÆ.

℞ Extracti Opii aquosi, drachmam unam.

Camphoræ, drachmas duas.

Syrupi simplicis, quantum satis.

Quandoque adduntur,

Tartritis Potassæ Stibiati, grana quindecim.

Fiant inde pilulæ sexaginta.

Sumat Pilulam unam vel duas omni nocte.

Usus: Dysuria nec non Blennorrhagia cordata, cum usu externo unguenti hydrargyri camphorati.

PULVERES.

94. PULVIS CATHARTICUS.

℞ Pulveris radices convolvulus-jalappæ, grana viginti.

Muriatis hydrargyri præcipitatione parati, grana decem.

Misce.

Vel:

℞ Pulveris radices Rhei palmati, grana viginti.

Tartritis potassæ aciduli, grana decem.

Misce.

95. PULVIS AD EXCRESCENTIAS.

℞ Pulveris Juniperus-Sabinæ,

Oxydi ferri lutei,

Aluminis fusi, ana partes æquales.

Vel:

℞ Pulveris Juniperus-Sabinæ,

Oxydi cupri acetosi, ana partes æquales.

96. PULVIS ESCHAROTICUS COERULEUS.

R Sulfatis cupri, quantum opus.

97. PULVIS ESCHAROTICUS RUBER.

R Oxydi hydrargyri rubri, quantum opus.

Vel:

R Aluminis fusi,

Oxydi hydrargyri rubri, ana drachmam unam

Misce.

98. PULVIS ESCHAROTICUS VIRIDIS.

R Oxydi cupri acetosi, quantum placet.

Vel:

R Oxydi cupri acetosi,

Muriatis hydrargyri, ana drachmam unam

Misce.

Usus: Ulcer syphilitica alve mali morisia.

99. PULVIS E MURIATE HYDRARGYRI.

R Muriatis hydrargyri præcipitatione parati, granum unum-
duo.

Sacchari, grana quindecim.

Misce. Sumat omni nocte.

100. PULVIS NITROSO-CAMPHORATUS.

R Gummi Mimosæ Niloticæ, scrupulum unum.

Nitratis potassæ, grana decem.

Camphoræ pineis subactæ, grana quatuor-octo

Misce. Sumat pulverem talem quater de die.

Vel:

R Nitratis potassæ,

Sacchari, ana grana quindecim.

Camphoræ pineis subactæ, grana duo-quatuor.

Misce, fiat pulvis, omni biborio sumendus.

101. PULVIS SUDORIFICUS *Doveri*.

R Nitratis potassæ,

Sulfatis potassæ, ana uncias quatuor.

Terantur simul in pulverum tenuem, et immittantur in
crucibulum ut igne liquescant; materiæ dein in morta-
rium ferreum effusæ et adhuc calenti adde

Opii purati siccati, unciam unam.

Dein post triturationem adjice,

Radicis Psycotriæ emeticæ pulverisatæ, unciam unam

Ut fiat pulvis subtilissimus.

Sumat æger grana quindecim-viginti mane in lecto, corpore panno laneo involuto, superbibendo hora post assumptum pulverem, seri lactis vinosi calidi uncias tres, et repetendo eandem dosin seri lactis omni semi-hora, donec copiose fluxerit sudor.

102. PULVIS STIBIATUS S. ANTIMONIALIS.

(Vulgo *James's powder*.)

℞ Sulfureti stibii nativi pulverisati.

Cornu cervi rasi, ana partes æquales.

Misce, et injice ollæ ferreæ latæ ad rubedinem calefactæ, et assidue agita, donec colore cinereo fuerint. Materiam refrigeratam in pulverem tere, et crucibulo loricato immitte. Crucibulum aliud inversum, cui parvum sit in fundo foramen, luto conjunge. Ignem subministra, quem ad rubedinem sensim auge, et ita auctum serva per horas duas. Denique materiam frigeffectam in pulverem subtilissimum tere.

SOLUTIONES.

103. SOLUTIO GUMMOSA.

℞ Gummi Mimosæ Niloticæ pulverisati, drachmas duas.

Solve in Aquæ fervidæ, *vel* in decocti hordei, libris duabus.

104. SOLUTIO MURIATIS HYDRARGYRI OXYGENATI.

℞ Muriatis hydrargyri oxygenati, grana sexaginta quatuor.

Aquæ destillatæ, uncias quatuor.

Muriatis ammoniacæ, drachmam unam.

Misce.

Sumat guttas sedecim in libra una decocti Sarsaparillæ, *vel* Malti aut Hordei, omni die.

Quandoque dosis guttarum ad quadraginta octo gradatim augetur; addendo, pro re nata,

Laudani liquidi Sydenhami guttulas viginti.

Nota. Sedecim guttæ hujus solutionis continent granum semis salis hydrargyri.

105. SOLUTIO NITRATIS HYDRARGYRI AMMONIACALIS.

℞ Acidi nitrici diluti, libram unam.

Carbonatis ammoniacæ, uncias septem.

Misce et, cessante effervescentia, adde

Hydrargyri puri, uncias octo, vel tantum quantum balneo arenæ solvere possit liquor; dein evapora massam ad crystallisationem.

R Hujus salis triplicis sicci, unciam unam.

Aquæ rosæ, uncias tres.

Iterum solve calore arenæ.

Dosis: guttas duas-tres ex cyatho aquæ fontanæ, semel de die.

Nota. Hæc solutio creditur esse genuina præparatio guttularum quæ Londini sub nomine: *D. Ward's White drops*, venduntur.

SYRUPI.

106. SYRUPUS ANTISYPHILITICUS.

(Vulgò *Sirofi de Cuisinier*.)

R Radicis Smilax-Sarsaparillæ, uncias triginta.

Infunde per 24 horas in

Aquæ fontanæ, libris viginti quatuor,

Dein coque ad libras octo; et repete eandem operationem bis cum magmate, effundendo liquorem singula vice; misce libras viginti quatuor decocti tribus vicibus sic obtenti, eique adde

Florum Borraginis officinalis,

Petalorum Rosæ albæ,

Seminum Pimpinella-anisi, ana drachmas duas

Foliorum Cassia-sennæ, unciam unam semis.

Coque ad libras duodecim, colaturæ adde

Sacchari,

Mellis, ana libras duas,

Ut fiat lege artis Syrupus.

Sumat uncias sex hujus syrupi quotidie, quibus, pro re nata, admiscetur Muriatis hydrargyri oxygenati, granum dimidium; et hæc dosis in tres portiones æquales dividatur, ita ut æger uncias duas sumat ter de die; adhibendo simul pro protu ordinario decoctum Sarsaparillæ ex drachmis sex hujus radices et aquæ libris sex paratum.

Nota. Si alvum nimium ducit, diminuatur dosis sennæ; sin minus, augeatur.

V. B. Si Arundo phragmites cum æquali portione Sarsaparillæ decoquatur eodem modo, obtinetur Syrupus, vulgò sub nomine *Rob antisymphiliticum* notus.

107. SYRUPUS HYDRARGYRI.

℞ Oxydi hydrargyri grisei, scrupulum unum.

Gummi Mimosæ Niloticæ, scrupulos tres.

Conservæ fructus Rosæ caninæ, quantum satis.

Tere in mortario non metallico, ut intime misceantur; deinde adde,

Syrupi simplicis, unciam unam semis.

Sumat mane et vespere cochleare parvulum, ex ligno vel ebure confectum.

TINCTURÆ.

108. TINCTURA ÆTHERIS FERRATI.

℞ Limaturæ ferri lævigatæ, unciam unam.

Acidi muriatici concentrati, quantum satis ut ferrum perfecte solvatur.

Solutio per aliquot tempus quieti exposita filtretur; dein ex retorta vitrea in balneo arenæ destilletur ad siccitatem.

Massa in retorta residua in loco humido seponatur, donec delisquescat. Massa deliquescentis phialæ epistomio vitreo instructæ immatur, eique ætheris sulfurici concentrati unciz duæ addantur; tunc phiala exacte clausa probe agitur, unde maxima pars ferri ætheri jungitur. Quamprimum æther ferro imprægnatus post brevem quietem supernatat, à liquore inferiori effundatur et cum dupla quantitate alcoholis misceatur, atque in vase vitreo exactissime clauso usui servetur.

Nota. Hæc Tinctura est præparatio correcta *Tinctura nervinæ* jure celebris, quæ diu secreta habita, nuper Imperatricis Rossiz munificentia, publici juris facta est.

Vel melius:

℞ Muriatis ferri liquidi,

Ætheris sulfurici, ana partes æquales.

Affunde ætherem muriati ferri, et relinque per quadrantem horæ, quo elapso æther ferro junctus et acido supernatans caute decantetur, et in vasis probe clausis usui servetur.

109. TINCTURA GAMBOGIÆ AMMONIACATA.

℞ Gummi-resinæ Gambogia-guttæ pulverisatæ, grana triginta sex.

Alcoholis ammoniacati (vulgo, *Spiritus salis ammoniaci vinosi* s. *dulcis*), uncias quatuor.

Misce et digere per octiduum.

Usus egregius in morbis cutaneis.

Dosis: cochleare anum-duo minora mane et vesperi.

110. TINCTURA FERRATA.

R Sulfatis ferri,

Tartritis potassæ aciduli, ana uncias quatuor.

Aquæ fontanæ, libras sex.

Coquantur in vase ferreo, sub continua agitatione, ad siccitatem fere, tunc adde

Aquæ corticis Laurus-cinnamomi, uncias quatuor.

Huic solutioni adde

Ætheris sulphurici alcoholisati, uncias octo.

Digerantur et filtrentur.

111. TINCTURA LITTÆ VESICATORIÆ.

R Littæ vesicatoriæ, drachmas duas.

Alcoholis diluti, libram unam.

Digere per octiduum et cola.

Usus præcipue externus in ulceribus phagadænicis et excrescentiis syphiliticis.

112. TINCTURA MURIATIS FERRI.

R Oxydi ferri, uncias duas.

Acidi muriatici concentrati, libram unam.

Digere per triduum, sæpius agitata phiala, dein effunde liquorem per subsidentiam depuratum, eique adde,

Alcoholis diluti, libras tres.

TROHISCI.

113. TROHISCI EX ACETITE HYDRARGYRI.

R Hydrargyri purificati, unciam unam.

Acidi nitrici, quantum opus,

ad perfectam hydrargyri solutionem; dein adde

Acetitis potassæ in aqua soluti, quantum opus ad hydrargyrum præcipitandum.

R Hujus pulveris (coloris perlati) præcipitati, quantum placet.

Misceatur triturando cum manna, melle vel saccharo, et cum mucilagine fiant lege artis Trohisci, qui vulgè sub nomini *Dragées de Keyser* venduntur.

M4. TROHISCI EX HYDRARGYRO SACCHARATO.

℞ Hydrargyri purificati, unciam unam.

Sacchari candi, uncias duas.

Triturentur in mortario addendo paucas guttulas aquæ, donec globuli hydrargyri perfecte disparuerint; tunc ex massa, lege artis, fiant cum mucilagine Trohisci ponderis granorum decem.

Sumat Trohiscum unam vel duo mane et vespere.

Nota. Quandoque gratiæ causa adduntur guttulæ aliquot olei volatilis baccarum Juniperi communis, vel florum Citrus-aurantii.

UNGUENTA.

115. UNGUENTUM EX ACIDO NITRICO.

℞ Axungiæ porcine purificatæ, libram unam.

Liquefiat leni igne, dein adde

Acidi nitrici puri (32 graduum,) uncias duas.

Massam igni expositam tubo vitreo diligenter agita, donec ebullire cœperit, tunc ab igne remotam depone ut frigescat.

Usus: Ulcera syphilitica; Herpes; Psora.

116. UNGUENTUM AD BLENNORRHAGIAM CORDATAM.

℞ Unguenti hydrargyri grisei, unciam unam.

Camphoræ, unciam semis.

Inungatur urethra hoc unguento, et fiat inde species cataplamatis.

117. UNGUENTUM E CUPRO.

℞ Unguenti basilici, unciam unam.

Oxydi cupri acetosi, scrupulum unum.

Misce.

118. UNGUENTUM E CUPRO (*Archigenis.*)

℞ Oxydi cupri viridis, drachmas tres-quatuor.

Thuris, drachmas duas.

Simul probe pulverisata tere cum aceto et adde

Terebinthinæ, drachmam unam.

Usus: Morbi cutis rebelles.

N. B. Partibus probe perfricatis impone portionem hujus unguenti per horam, aut bihorium, deinde per idem temporis spatium tolle, et sic alternatim.

119. UNGUENTUM HYDRARGYRI GRISEUM.

- ℞ Oxydi hydrargyri grisei, uncias duas.
 Sevi ovilli purificati, unciam semis.
 Simul probe tritis adde,
 Butyri cacao, unciam unam semis.
 Misce, et in loco frigido et obscuro usui conserva.

Vel:

- ℞ Hydrargyri purificati, unciam unam.
 Oxydi hydrargyri rubri, grana decem.
 Terantur simul donec hydrargyrum colorem griseum aut
 nigricantem acquisiverit; dein adde
 Axungiae porcinae purificatae, unciam unam.
 Usui conserva ut prius.

Nota. Vide etiam supra *Oxydum hydrargyri unguinosum*.

120. UNGUENTUM E MURIATE HYDRARGYRI.

- ℞ Muriatis hydrargyri præcipitatione parati, drachmam unam-
 duas.
 Cerati albi (aut medullæ ossium,) unciam unam.
Usus: ulcera syphilitica; vel etiam pro frictionibus instar un-
 guenti hydrargyri grisei.

121. UNGUENTUM E MURIATE HYDRARGYRI AMMONIACALI.

- ℞ Muriatis hydrargyri ammoniacalis, drachmam unam.
 Axungiae porcinae, unciam unam.

Usus: Morbi cutis.

122. UNGUENTUM E NITRATE HYDRARGYRI.

- ℞ Hydrargyri purificati,
 Acidi nitrici, ana unciam unam.
 Digere in balneo arenæ, donec hydrargyrum solvatur; dein
 adde diligenter agitando,
 Olei Olivarum, uncias quatuor.
 Axungiae porcinae purificatae, uncias octo.
 Ut fiat unguentum.

N. B. Aliquando duplex Olei portio sumitur, et Camphoræ
 drachmæ duæ adduntur.

Vel:

- ℞ Hydrargyri, unciam unam.
 Acidi nitrici, uncias duas.

Olei Olivarum, uncias duodecim.

Axungiae porcinae purificatae, uncias quatuor.

Oleo et axungiae simul fuis, adde solutionem hydrargyri,
ut fiat unguentum.

123. UNGUENTUM E PLUMBO.

R Olei Olivarum, uncias octo.

Cerae albæ, unciam unam semis.

Acetitis plumbi lævigati, drachmas duas.

Acetis plumbi cum portione olei trituretur, dein cera cum
oleo reliquo calefacta addatur, agitando massam, donec
frigescat.

124. UNGUENTUM EX OXYDO HYDRARGYRI RUBRO.

R Oxydi hydrargyri rubri, drachmas duas.

Unguenti basilici, unciam unam semis.

125. UNGUENTUM RESOLVENS.

R Unguenti hydrargyri grisei, unciam unam.

Saponis nigri, drachmas duas.

Camphoræ, drachmam unam.

Usus: Periostosis (Tophi et nodi syphilitici);

Tumor epididymidis, aut testiculi.

VINA.

126. VINUM ROBORANS AD BLENNORRHOEAM.

R Corticis Cinchonæ officinalis, uncias duas.

Gallarum, drachmas duas.

Caryophyllorum aromaticorum, drachmam semis

Pulverisata infunde per biduum in

Vini rubri, libra una.

Sæpius agitando. Liquorem per subsidentiam depuratum
effunde, et massam residuam cum Aquæ fontanæ, libra
una infunde per horam; cola, et misce cum priori.

Sumat cochlearia quatuor majora ter quaterve de die.

127. VINUM TONICUM.

R Corticis Cinchonæ officinalis subtilissime pulverisati, un-
ciam unam semis.

Infunde per biduum, sæpius agitando, in

Vini generosi, unciis sedecim.

Dein effunde liquorem per subsidentiam depuratum, eique adde,

Olei Cajeput (ex foliis Melaleuca-Leucadendri distillatione obtenti,) cum Sacchari albi uncia una triti, guttas quadraginta octo.

Ætheris sulphurici alcoholisati, uncias duas.

Sumat uncias duas-tres, bis terve de die.

FINIS.

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